Attachment F

Waste Analysis Plan

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Waste Analysis Plan

1 WASTE ANALYSIS PLAN

This Waste Analysis Plan (WAP) establishes Facility requirements for accepting and characterizing hazardous waste generated both off-site and on-site. The WAP requirements are established in the New Mexico Hazardous Waste Management Regulations at 20.4.1.500 NMAC incorporating 40 CFR § 264.13 and 20.4.1.800 NMAC incorporating 40 CFR § 268.7, as required by 20.4.1.900 NMAC incorporating 40 CFR § 270.14(b)(3). The most recent revision of this WAP will be maintained at the Facility as part of the Facility Operating Record. The Facility will continually upgrade the WAP with regard to the land disposal restriction (LDR) regulations contained in 40 CFR § 268.

Section 1.1 identifies wastes that will be accepted at the Facility and wastes that are prohibited. Section 1.2 lists criteria for waste acceptance and management. Sections 1.3 and 1.4 contain pre-acceptance procedures for initial acceptance of hazardous waste received from off-site generators and management procedures for incoming shipments of waste. The various waste analysis protocols that will be required at the Facility are contained in Section 1.5. Sampling and analytical methods and protocols for quality assurance/quality control (QA/QC) are discussed in Sections 1.6 and 1.7. Section 1.8 explains the Facility's waste tracking system. Section 1.9 summarizes notification, certification, and recordkeeping requirements related to waste analysis.

1.1 Permitted and Prohibited Waste

Section 1.1.1 identifies hazardous waste permitted for acceptance at the Facility. Hazardous waste prohibited at the Facility is identified in Section 1.1.2.

1.1.1 Permitted Waste

The Facility may only dispose of those hazardous wastes listed in Part A of the Facility's Permit Application. Only hazardous waste which meets the LDR treatment standards identified in 40 CFR § 268, Subpart D shall be accepted. These treatment standards are applicable to both primary contaminants and underlying constituents.

1.1.2 Prohibited Waste

The Facility shall not accept the following wastes from off-site generators:

i. Waste that does not meet LDR treatment standards.

ii. *Liquid waste:* Bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids as defined in 40 CFR § 260.10.

iii. *Dioxin-contaminated wastes*: Wastes prohibited by 40 CFR § 268.31s.

iv. *Certain PCB-contaminated soils:* Soils with polychlorinated biphenyl (PCB) concentrations greater than or equal to 50 ppm, except for those soils (or other wastes) that are PCB bulk product waste or PCB remediation waste (40 CFR § 761). The Facility must obtain a permit from the U.S. Environmental Protection Agency (EPA) for management of Toxic Substances Control Act (TSCA) wastes in order to accept other wastes containing PCB concentrations greater than 50 (parts per million) ppm. A copy of this permit shall be submitted to the New Mexico Environment Department (NMED) prior to acceptance of such waste.

v. *Organic wastes:* Wastes containing organic constituent concentrations at levels that make them subject to the treatment, storage, and disposal requirements described in 40 CFR § 264 Subpart AA or CC; and that have not been treated, prior to receipt at the Facility, to applicable LDR treatment standards (40 CFR § 264 Subpart AA and CC as adopted by 20.4.1.500 NMAC).

vi. *Explosives:* Any substance or article, including a device, that is designed to function by explosion (i.e., an extremely rapid release of gas and heat) or that, by chemical reaction, is able to function in a similar manner even if not designed to function by explosion.

vii. *Radioactive/nuclear materials*: Materials regulated by NMED or the New Mexico Oil Conservation Division (OCD) and defined in 20.3.14 NMAC, or materials regulated under the Atomic Energy Act of 1954, as amended (including source, special nuclear materials and byproduct materials as defined in 10 CFR § 20.1003).

viii. *Medical waste:* Waste including infectious/biologic/pathogenic solid waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals. This also includes infectious waste as defined in 20.9.2.7.I(5) NMAC.

ix. *Packing house and killing plant offal:* Defined as a special waste by 20.9.2.7.S(13)(b) NMAC.

x. *Certain hazardous debris*: Hazardous debris that has not been treated, prior to receipt at the Facility, to meet the LDR treatment standards.

xi. *Certain lab packs:* Lab packs that contain wastes [identified in 40 CFR § 268, Appendix IV] excluded from lab packs under the alternative treatment standards of 40 CFR § 268.42(c).

xii. *Compressed gases:* Gases stored at pressures higher than atmospheric pressure.

xiii. *Unknown or unidentified waste:* These wastes shall not be accepted at the Facility except by special provision and direction from the NMED Secretary (e.g., emergency clean-up operations) or until full characterization has been performed.

xiv. Waste containing asbestos that is subject to regulation under the Toxic Substance Control Act.

1.2 Criteria for Waste Management at the Facility

Waste managed at the Facility must meet the Facility's criteria for acceptance and management. Waste analysis or, if approved by NMED, acceptable process knowledge (AK) shall be used to ensure determination of:

i. complete and representative characterization of the waste;

ii. compliance with LDR treatment standards, including, where applicable, underlying constituents. If the waste stream does not meet the LDR treatment standards, the waste shall be rejected; and

iii. compliance with the Facility's regulatory and operational limits (e.g., the waste is not included in the permitted wastes listed in Part A of this application or, the waste does not meet other operational limits established by this WAP).

The criteria to be used to evaluate AK validity, appropriateness, and adequateness will include the following:

- relationship of wastes generated to process information;
- availability of supporting analytical data and results;
- correlation of waste material with processes/product chemistry;
- process line variability with respect to waste generation;
- waste alteration ortreatment activities and resulting waste characterization; and
- all other relevant information to assess acceptability of information.

1.3 Pre-Acceptance Procedures for Off-Site Waste

Before a waste stream is accepted, all off-site generators will be required to provide a complete waste characterization (Section 1.3.1). After evaluating the information supplied by the generator (Section 1.3.2), the Facility shall send a representative sample of the waste to a laboratory for analysis and will evaluate the analytical results (Section 1.3.3). Finally, the Facility will notify the generator that the Facility will accept the waste stream (Section 1.3.4).

1.3.1 Waste Characterization Information Provided by the Generator

The activities associated with pre-acceptance of off-site waste streams are shown in Figure 4-1. The generator must provide the following waste characterization information for each waste stream:

i. a completed Waste Profile Form signed by an authorized agent of the generator. An example of a Waste Profile Form is contained in Permit Attachment F2. This form may be changed if the Facility believes that more information is warranted or if there are changes in regulations governing the Facility;

ii. other documentation that supports the information presented on the Waste Profile Form (e.g., safety data sheets [SDSs]);

iii. a description of the process that generated the waste;

iv. a completed Land Disposal Restriction Notification;

v. all other supporting data required by 40 CFR § 268.7;

vi. all required certifications;

vii. waste analysis data used to characterize the waste documentation and/or process knowledge documentation, as applicable ; and

viii. a representative sample of the waste, of adequate volume for analysis.

If waste analysis is used to characterize the waste, the generator must supply, at a minimum, the following waste analysis data for each representative sample:

a. identification of the sample medium (e.g., sludge, soil);

b. information about waste stratification;

c. brief description of the sampling strategy,

d. a description of the sampling technique (i.e., biased or random);

e. rationale for selection of the number and location of samples;

f. a description of the statistical approach, if any;

g. the sample type (e.g., grab, composite);

h. identification of the analytical methods that were used and the rationale for the selection of these parameters;

i. final laboratory reports including case narratives, waste analyses, and QA/QC analyses; and

j. identification of the laboratory that performed the waste analyses.

The Facility shall evaluate the way each representative sample was obtained in order to determine whether it is truly representative of the waste stream. The Facility shall evaluate the information provided by the supplier and will use the documents listed below for guidance:

- The Sampling Plan, Section 1.6 of this document,

- Standard Practice for Sampling Waste and Soil for Volatile Organics (American Society for Testing and Materials (ASTM) D4547-91),
- Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, (US Environmental Protection Agency Publication SW-846, latest edition), and
- RCRA Sampling Procedures Handbook (EPA Region VI).

In certain cases, generators may meet waste analysis requirements by supplying AK, including process knowledge and waste analysis (Permit Attachment F4 identifies acceptable knowledge requirements for foreign generators). Process knowledge includes detailed information of a waste obtained from existing published or documented waste analysis data or studies on hazardous wastes generated by processes similar to that which generated the waste, or industry or trade association hazardous waste profile studies, or EPA documents. Examples of waste streams where process knowledge may be adequate for characterization are K-listed wastes (hazardous wastes from specific sources), which are identified by comparing the specific process that generated the waste to those processes listed in 40 CFR § 261.32. The application of process knowledge is appropriate where the physical/chemical make-up of the waste is well known and consistent. Process knowledge is typically used in conjunction with physical and analytical analysis.

Foreign Generators shall, in addition to all of the above requirements, analyze wastes at an accredited laboratory in accordance with Section 1.7.4, Laboratory Requirements for Foreign Generators, and shall characterize all waste streams in accordance with Permit Attachment F4, Waste Characterization Using Acceptable Knowledge.

1.3.2 Paperwork Evaluation

The Facility shall evaluate all of the waste characterization paperwork to determine if it adequately represents the physical and chemical characteristics of the waste stream and whether the waste stream is appropriate for management at the Facility. As part of the pre-shipment process, the Facility shall work with the off-site waste generator to ensure that all necessary waste analyses and waste characterization information are provided to meet the applicable requirements for acceptance.

If waste analysis was used to characterize the waste, the Facility will evaluate the data to determine that:

i. appropriate extraction and preservation techniques were used;

ii. appropriate sampling strategies were used;

iii. appropriate representative sample types were collected;

iv. appropriate parameters were selected for analysis;

v. appropriate analytical methods were used;

vi. recommended holding times were met;

vii. detection limits were below applicable standards (e.g., the LDR standards); and

viii. the quality of the analytical data is valid and adequate for making a waste determination based on an evaluation of the final laboratory reports.

If the data supplied are not adequate to provide a complete characterization of the waste stream, the Facility will either require additional information from the generator or will not accept the waste.

All of the waste characterization information supplied by the generator shall be maintained in the Facility's Operating Record. In addition, the Facility's evaluation of this information and the results of the independent analysis shall be maintained in the Operating Record.

1.3.3 Representative Sample Assessment

After evaluation and approval of the sample representativeness and waste characterization data paperwork, the representative sample submitted by the generator shall be analyzed by a qualified laboratory that is not the same laboratory as that used by the generator. Based upon the Facility's evaluation of the information supplied by the generator, the Facility will inform the laboratory of the medium type (e.g., aqueous, solid) and appropriate parameters for chemical analyses. The rationale for selection shall be maintained in the Facility Operating Record.

The generator's Waste Profile Form shall be compared with the results of the laboratory analyses of the representative sample and with the Facility's permit to ensure that the waste is acceptable for disposal at the Facility. Should there be a discrepancy between the analytical results and the generator information, the Facility will contact the generator to resolve the discrepancy. The generator shall not be authorized to ship the waste until all discrepancies are resolved. If the discrepancies cannot be resolved with the information provided by the generator, the Facility may request a new Waste Profile Form and any additional information that may be required to characterize the waste adequately or reject the waste stream for disposal. In addition, the Facility may require the generator to submit additional samples of the waste for analyses. If the generator cannot supply adequate information to provide a complete characterization of the waste stream, the Facility will not accept the waste. The generator shall submit a new Waste Profile Form for each new waste stream and for an existing waste stream if the composition of the waste stream changes significantly.

1.3.3.a Significant Discrepancies

Significant discrepancies include the following:

i. analytical results indicating that the generator applied an incomplete or incorrect waste code to the waste stream;

ii. analytical results indicating that the generator submitted incomplete or incorrect information on the LDR Notification Form;

iii. analytical results including constituents or underlying hazardous characteristics that are not explained by a description of the process; and

iv. any other information indicating that the waste stream is not characterized properly.

In the event of a significant discrepancy, the Facility shall reject the paperwork and require the generator to analyze the waste in accordance with a sampling plan that is consistent with the guidance in EPA document *SW-846, Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,* Chapter 9. The Facility shall require the generator to resubmit the waste characterization information listed in Section 1.3.1 and one or more additional representative samples for chemical analyses.

1.3.3.b Minor Discrepancies

Minor discrepancies include any other waste characterization discrepancy (e.g., discrepancies that do not potentially affect hazardous waste code assignments, waste treatment, or the presence of prohibited items). In the event of a minor discrepancy, the Facility shall work with the generator to resolve the discrepancy. For example, uncertainties regarding whether sorbents are present will be handled as minor discrepancies. The Facility shall contact the generator if the Waste Profile Form does not indicate whether a sorbent was added to the waste, or if it indicates that a sorbent was added but does not specify the name and type of sorbent and whether it is biodegradable. If the generator cannot provide this documentation, the waste must be tested to determine whether it contains a biodegradable sorbent. If the waste is determined to contain a biodegradable sorbent, it shall be rejected.

1.3.3.c Additional Waste Acceptance Conditions

In addition to complete characterization of the waste, the Facility shall also evaluate the waste to ensure that it can be managed at the Facility. Waste analysis shall be conducted where necessary to ensure that:

i. the waste is not prohibited (e.g., the waste is included in Part A of this application, is not listed in Section 1.1 as a prohibited waste, or does not exceed allowable PCB concentrations or include dioxins);

ii. the LDR treatment standards contained in 40 CFR § 268, Subpart D, including the standards for underlying hazardous constituents, are met;

iii. the general requirements contained in 40 CFR § 264.17 for ignitable, reactive, and/or incompatible waste are met; and

iv. the waste does not contain biodegradable sorbents, as required in 40 CFR § 264.314(d).

All significant and minor discrepancies, discrepancy resolutions, and compliance with the additional waste acceptance conditions listed above shall be documented in writing and maintained in the Facility Operating Record.

1.3.4 Notification and Approval of Waste Shipment

After the Facility determines that the waste stream meets the pre-acceptance requirements, the Facility shall send a written notification to the generator. This notification shall include the following:

i. a statement that the waste is acceptable for shipment;

ii. a unique identifier number for the waste stream, assigned by the Facility (see Section 1.10);

iii. instructions to put the unique identifier number on all shipment paperwork and all future waste characterization data that are submitted for the waste stream;

iv. a requirement to notify the Facility at least 24 hours before shipping, so that the Facility can ensure that there are sufficient resources and capacity to manage the shipment when it arrives;

v. a statement that the Facility reserves the right to delay acceptance of shipments beyond the 24-hour time frame;

vi. instructions to ensure safe management of the waste (e.g., packaging or labeling requirements not otherwise required by regulations);

vii. if the generator has treated the waste prior to shipment in order to meet applicable LDR treatment standards, a requirement that the generator develop and follow a written WAP that describes the procedures used; and

viii. a requirement that the generator retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to characterization of the waste stream for five years from the date that the waste was last sent to the Facility.

Once the Facility has completed pre-acceptance requirements and has determined that a waste stream is acceptable for shipment, the on-site laboratory will be notified in writing. The notification shall include the waste type, waste stream identifier, physical form, packaging, and how the waste is to be managed. This information shall be used by the laboratory as follows:

- the waste stream identifier shall be used to track the samples in relation to the waste stream;
- the waste type shall be used to help determine the analytical methods to be employed for fingerprint analysis; and
- the physical form and packaging will determine the most applicable sampling methods.

Using this information, the on-site laboratory shall designate a sampling and analytical protocol specific to each waste stream as described in Section 1.6. The unique identifier number for the waste stream shall be used to track all activities for the waste stream. Individual shipments from within the waste stream shall receive an additional identifier to enable the Facility to tie information back to the specific shipment as well as to the waste stream.

1.4 Procedures for Incoming Waste Acceptance

The activities associated with incoming waste shipment are shown in Figure 4-2. These procedures shall be used for both initial shipment of a waste stream and for waste streams that have previously been accepted by the Facility from the same generator and process. The Facility shall review the waste shipment paperwork and resolve paperwork discrepancies (Section 1.4.1), and visually inspect the waste inside the containers and roll-off boxes (Section 1.4.2). Waste analyses for incoming shipments consist of fingerprint analysis, analysis of initial five shipments of each waste stream to ensure conformity with the waste generator supplied information, and an annual analysis to update characterization of the waste stream (Section 1.4.3). Based on the Facility's evaluation of the waste stream, a determination to accept or reject the waste will be made (Section 1.4.4).

1.4.1 Paperwork Review

Upon receipt of a waste shipment, the vehicle shall be routed to a parking area outside the Facility gate while documents are reviewed. The Facility shall:

i. review all paperwork for completeness to verify that all required documentation is present and signed as necessary;

ii. compare the information in the manifest, the Waste Profile Form, the LDR Notification Form, and pre-acceptance waste characterization information for consistency;

iii. compare the number of containers, the volume or weight of the waste, and the waste labels on each container with the manifest for consistency; and

iv. review all paperwork to verify that the unique identifier number for the waste stream is on all the waste shipment paperwork and all accompanying waste characterization data.

If the Facility determines that the paperwork is complete and consistent, the waste shipment will be routed to the truck sampling station, a staging area inside the Facility gate.

If the Facility determines that the paperwork is incomplete or inconsistent, the waste shipment shall be routed to a segregated, secure area inside the Facility gate pending resolution of the discrepancies. No such shipment shall be allowed to remain wihin the Facility for more than 15 days. An attempt will be made to resolve discrepancies with the waste generator or transporter within 24 hours. In those instances where a discrepancy with the manifest cannot be resolved within 15 days of receiving the waste, a letter shall be submitted to the NMED describing the discrepancy and the attempts made to reconcile it. A copy of the manifest or shipping paper at issue also shall be provided to the NMED, as specified in 40 CFR § 264.72(c). If the Facility is unable to resolve the manifest discrepancies, the waste will not be accepted.

The Facility shall resolve significant manifest discrepancies in accordance with 40 CFR § 264.72. Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest and the quantity or type of hazardous waste contained in the shipment received at the Facility.

Significant discrepancies in quantity are:

- *Bulk waste:* variations greater than 10 percent in weight; and
- *Batch waste:* any variation in piece count, such as a discrepancy of one drum in a truckload.

Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid or toxic constituents not reported on the manifest or shipping paper.

All discrepancy resolutions shall be documented in writing and maintained in the Facility Operating Record. If manifest discrepancies are not resolved within 15 days of identifying the discrepancy, waste shall not be accepted for disposal, and the waste shall be returned to the sender or transported to an appropriate off-site facility.

1.4.2 Visual Inspection

After all paperwork discrepancies have been resolved, the Facility shall physically open and inspect the waste inside drums and roll-off boxes for color, similar physical appearance (e.g., single phase, bi-layer, or multi-layer), and physical state (e.g., solid or semi-solid). This information shall be compared with the waste characterization information provided by the generator and the physical appearance of the representative sample. If the color and/or viscosity of bulk wastes (solids and sludges) appear inconsistent or at the Facility's discretion, the Facility may elect to perform additional chemical tests (e.g., composite samples may be collected from within the different areas of coloration or viscosity).

The Facility shall inspect a minimum of 10 percent of all drums of each waste stream per shipment (but not less than one drum per waste stream) and each roll-off container.

The Facility shall physically open all containers of hazardous debris and inspect the contents to ensure that the waste shipment matches the waste that is expected. Prior to acceptance of hazardous debris, the Facility shall require the generator to provide a certification that the waste has been treated in accordance with the requirements defined for the treatment of hazardous debris in 40 CFR § 268. Hazardous debris is visually inspected because it is exempted from the representative sample waste analysis requirements discussed in Section 1.7.2. This visual inspection must ensure that the waste stream matches the description provided by the generator.

Certain loads may not be sampled, at the discretion of the Facility manager or laboratory supervisor, for environmental and safety reasons (e.g., severe weather which causes unsafe working conditions). In these cases, the generator or his agent shall be required to provide a signed certification that the load conforms to the Waste Profile Form. This variance from established procedure shall be documented in the Facility Operating Record.

If a discrepancy is found, the Facility shall contact the waste generator for resolution (see Section 1.4.1). The results of visual inspections and all discrepancy resolutions shall be documented in writing and maintained in the Facility Operation Record. If discrepancies noted during visual examination are not resolved within 15 days of identifying the discrepancy, waste shall not be accepted for disposal, and the waste will either be returned to the sender or transported off-site to an appropriate facility.

1.4.3 Waste Analysis for Incoming Shipments

Waste analysis for incoming shipments consists of fingerprint tests (Section 1.5.4), analysis of initial five shipments of each waste stream, and an annual analysis to ensure correct characterization of each waste stream (Section 1.5.3).

1.4.3.a Fingerprint Test Procedure

Fingerprint testing is an abbreviated analysis and is used to confirm that an incoming shipment of waste received at the Facility is the actual waste expected and that it matches the expected chemical content for that waste. Fingerprint analysis shall be conducted on each waste stream in each shipment prior to shipment acceptance. Fingerprint analysis shall be conducted generally for parameters that will provide information that can be used to verify that a waste stream received from off-site matches the expected characteristics of the waste.

While the incoming shipment is staged at the sampling station, laboratory personnel or other trained personnel shall review the sampling and laboratory requirements for the specific waste stream. After completion of this review, sampling personnel shall obtain the necessary samples in the manner prescribed by the Sampling Plan and applicable laboratory requirements. Sampling shall be conducted in accordance with approved site operating procedures. These procedures shall detail the sampling requirements, sample labeling, chain-of-custody

requirements, any necessary sample preservation requirements, and other sampling components (see Section 1.6).

Each waste stream in each shipment shall be sampled in accordance with the following sampling rate, at a minimum:

- *Bulk waste*: one sample shall be collected from each shipment of bulk waste (one shipment of bulk waste is considered to be one truck load or one roll-off box). If, upon visual inspection, the color and viscosity of solids or sludges appear inconsistent or at the Facility's discretion, the Facility may elect to obtain additional samples. These samples may be collected from within the different areas of color or viscosity; and
- *Batch waste:* one sample shall be collected from each 10 waste drums in each waste stream in each shipment. If there are less than 10 waste drums in the waste stream, one drum shall be sampled. One sample shall be collected from each drum if the waste appears to be inconsistent with the pre-acceptance waste characterization data.

The Facility may increase this sampling rate for any reason. For example, the Facility may decide to collect additional samples if the waste appears to be inconsistent between containers or with the pre-acceptance characterization data. In some instances, the Facility may elect to waive one or more analyses under the following conditions:

- the transported waste is a portion of a continuously shipped, well documented waste stream, such as waste produced from a consistent, non-variable process or contaminated soils from a specific remedial action;
- the waste has been approved for receipt by the NMED on an emergency basis; and.
- Facility personnel at the point of generation sampled, or oversaw the sampling of, the waste, and the fingerprint test/supplemental analyses have been conducted. (In cases where a generator is sending very large or continual shipments, the Facility may elect to station personnel at the point of generation to obtain samples prior to or during loading of the waste).

Prior to waiving any sampling and analysis requirements, the Facility shall request a variance from the NMED and shall not dispose of the waste until NMED approval is received.

1.4.3.b Annual Analysis Procedure

As part of the Facility's QA/QC procedures (see Section 1.7.2), the representative sample analysis for each waste stream from each generator shall be repeated annually. Repeating this pre-acceptance procedure shall ensure that the analysis is accurate and up-to-date and that the waste stream has remained within the operational bounds of the Facility. This annual analysis shall be performed by an independent laboratory. This analysis shall be repeated more frequently if the Facility believes, or has been informed by the generator, that the process

generating the waste stream has changed. In the case of a change in the waste generation process the waste stream shall be managed as a new waste stream in accordance with the requirements of this WAP.

1.4.3.c Analysis of Initial Five Shipments

As part of the Facility's QA/QC procedures, the Permittee shall submit representative samples collected from the first five shipments of each waste stream from each generator for the appropriate characterization laboratory analyses and compare the test results to the generator supplied data to ensure that discrepancies do not exist between the waste received and generator supplied information. If no significant discrepancy is discovered then the Permittee shall conduct representative sampling and analysis for each waste stream from each generator as specified at Permit Part 1.4.3.b. If significant discrepancies are discovered, then the Permittee shall analyze each incoming waste shipment from that waste generator until no significant discrepancies are observed for five consecutive shipments.

1.4.4 Acceptance/Rejection Determination

1.4.4.a Discrepancy Resolution

Upon completion of the fingerprint analysis, a determination will be made as to whether or not the wastes are consistent with the pre-acceptance waste characterization information and within the acceptance limits of the Facility. If any of the analyses determine the waste is not within the operational acceptance limits for disposal, the waste shall not be accepted by the Facility. If the results of the analysis conflict with the waste profile information, the Facility may take any or all of the following actions:

i. resample the waste, if necessary, and perform a second fingerprint test. The Facility manager has discretion to accept the waste if the second fingerprint results match those on the waste profile sheet. The discrepancy between results shall be explained and included in the Facility Operating Record for that waste stream or shipment;

ii. perform further characterization as necessary to verify the composition of the waste by sending a sample to a qualified independent analytical laboratory; and

iii. reject the entire waste shipment or the nonconforming portion of the shipment.

If discrepancies between fingerprint analysis and waste stream characterization information exist upon completion of discrepancy resolution, the waste shall be rejected by the Facilityand the rejected waste returned to the generator or, alternately, the Facility will ensure proper transport of the waste at to an appropriate off-site facility within 30 days of the waste rejection.

1.4.4.b Shipment Acceptance Procedures

Once the decision has been made to accept a waste shipment, the appropriate papers shall be signed for the generator, and the waste stream will be transported to the landfill.

1.5 Waste Analysis

Tables F-1 through F-3, specify parameters which will be analyzed to ensure that all criteria for waste acceptance and management are met. The Facility will use approved SW-846 or ASTM analytical methods, or alternate NMED- approved method. If an alternative method not contained in SW-846 is to be used, the Facility shall demonstrate that such alternative method is equivalent or superior to the approved method contained in SW-846 or this WAP. Alternative methods shall be submitted to the NMED at least 30 days prior to the sample collection event.

Permit Attachment F1, Section 1.5.1, identifies the rationale for selecting parameters and analytical methods that shall be used to test hazardous waste managed at the Facility. Requirements for the pre-acceptance analysis of a representative sample of waste generated off-site and for the annual analysis are discussed in Sections 1.5.2 and 1.5.3, respectively. Section 1.5.4 contains requirements for fingerprint testing. Section 1.5.5 contains waste analysis requirements specific for the landfill. Section 1.5.6 contains requirements for analysis of waste generated on-site.

TABLE F-1. PARAMETERS AND METHODS FOR PRE-ACCEPTANCE REPRESENTATIVE SAMPLE ANALYSIS

Waste Parameters	Extraction/Sample Preparation	Method[a]
Volatile organic compounds	5021 5031 5032 5035	8260
Semivolatile organic compounds	3510 3520	8270
Organochlorine pesticides	3510 3520	8081/8270
PCBs	3520	8082/8080
TCLP: Organics	1311	8260/8270/8080/8150
Chlorinated herbicides	8151[b]	8151
Reactive cyanide		9014
Reactive sulfide		9034
Ignitability		1010/1030
Flashpoint		1010/1020A
Corrosivity to metals		1110, pH paper, pH electrometer, 9040A/9041A/9045A
pH		9040A/9041A9045A
Dioxins		8280
Metals	3000 1311	6000 series 7000 series
Liner compatibility tests		9090A
Extractable volatiles	3500	8260
Extractable semivolatiles	3500	8270
Physical appearance		ASTM D4979

Waste Parameters	Extraction/Sample Preparation	Method[a]
Radioactivity		Industry standard survey technique (e.g., scintillation detector)

a Most current revision of SW-846 will be used.

b Method 8151 contains the extraction, cleanup, and determinative procedures for these analytes.

TABLE F-2. TESTS AND ANALYTICAL METHODS FOR FINGERPRINT SAMPLES

Test	Method and Description	Qualitative or Quantitative
Flammability potential screen	ASTM D4982	Qualitative
Free liquids	Paint filter test, penetrometer, or visual/9095	Qualitative
Ignitability	Match test, Pansky-Martens closed cup or Set-a-flash 1010/1020A	Qualitative
Miscibility	50/50 mixture with water	Qualitative
Chlorinated solvents	Colorimetric test or Beilsten test	Quantitative
Cyanide	Electrode or colorimetric test (ASTM D5049 Test Method B)	Quantitative
PCBs	Colorimetric test/8080	Quantitative
Specific gravity	Hydrometer/Method dependent on material composition and physical state	Quantitative
Sulfide screen	ASTM 4978	Quantitative

TABLE F-3. ADDITIONAL TESTS AND ANALYTICAL METHODS

Test	Reference	Description
Paint filter test	EPA 9095	This test will determine the free liquids that are contained within the waste matrix and will be used as a control parameter for wastes that are to be landfilled.
Heavy metals	6010A/7470	This test determines the concentration of heavy metals.
Free cyanides	APHA 412G, H	This test determines if cyanides could potentially be reactive under acidic conditions.
Toxicity characteristic leaching procedure[a]	Extraction Method 1311/3010A	Tests if waste, or stabilized waste, contains level of restricted constituents.
Total organic halogens	EPA 9020	Tests if the waste potentially contains LDR constituents above BDAT standards for California List wastes.
PCBs	Colorimetric test/EPA 8080	Tests if PCBs are contained in the waste matrix and determines the concentration.
IR scan	ASTM D2621, D4053	Tests for the presence of organics and provides a rough estimate of their concentration.

a Analytical method chosen is dependent upon constituent being determined (i.e., Organics 8260, 8270, 8080).

1.5.1 Rationale for Analytical Parameter Selection

See Permit Attachment F1

1.5.2 Representative Sample Analysis

The Facility shall select parameters for analysis to ensure that the criteria for waste acceptance identified in Section 1.2 are met. The analysis shall include, at a minimum, testing for each hazardous waste contained in the waste stream, as identified by EPA hazardous waste code, and for each underlying hazardous constituent, as identified in Table F-1, Parameters and Methods for Pre-Acceptance Representative Sample Analysis. Additionally, parameters on Tables F-2, Tests and Analytical Methods for Fingerprint Samples, and F-3, Additional Tests and Analytical Methods, shall be included, as applicable.

For foreign wastes, in addition to the conditions specified above, representative sample analysis for each waste stream shall include testing for all constituents listed in 40 CFR § 268.48 using practical quantitation limits capable of measuring the standards specified in 40 CFR § 268.48. The results of this test shall be used to perform the comparison with the generator's Waste Profile Form specified in the Representative Sample Assessment Section (Waste Analysis Plan Condition 1.3.3). Testing for all constituents listed in 40 CFR § 268.48 shall not be required for the annual analyses.

Hazardous debris, as defined in 40 CFR § 268.2(g), that has already been treated to meet the LDR treatment standards as described in 40 CFR § 268.45 does not have to meet the representative sample analysis requirements, if the Facility determines that the generator provided waste characterization information that demonstrates that the proper EPA Hazardous Waste Numbers were applied and indicates whether or not the LDR treatment standards have been met.

1.5.3 Initial Five Shipments and Annual Analysis

The representative sampling and analyses for each waste stream from each generator shall be conducted on the initial five shipments at an independent analytical laboratory other than the laboratory used by the generator (see Section 1.4.3.c). The representative sample analyses for each waste stream from each generator shall, at a minimum, be repeated annually. (see Section 1.4.3.b).

1.5.4 Fingerprint Analysis

Fingerprint samples shall be analyzed for all parameters listed on Table F-2, and may include tests for physical appearance, pH, and radioactivity. Additional fingerprint parameters shall be selected based on the pre-acceptance waste characterization data, shipment records, physical form of the waste, and the visual inspection of the contents of containers and bulk waste. The Facility shall follow the additional parameter selection process described in Section 2.2 of the EPA guidance document, Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Wastes (EPA, OSWER 9938.4-03, April 1994).

Based on the detailed chemical and physical properties of a waste, additional necessary and appropriate fingerprint or spot check parameters shall be chosen to verify that the waste fingerprint analysis includes, at a minimum, the parameters to confirm the waste received is the waste streamidentified by the generator. These parameters shall either be analyzed at the on-site laboratory or at an off-site analytical laboratory. Analyses that are not within the on-site laboratory's capability shall be sent to an independent laboratory for analysis.

Fingerprint analysis also shall include all parameters necessary to ensure that the waste is within the Facility regulatory and operational acceptance limits (see Table F-3). To select these additional sample parameters, the Facility shall consider:

i. compliance with applicable regulatory and permit requirements (may require selection of parameters not reported by the generator);

ii. identification of incompatible and inappropriate wastes; and

iii. process and design considerations.

Fingerprint analyses is intended to minimize the potential to receive waste that is unacceptable. Therefore, the level of additional analyses required for a waste shipment is a function of Facility knowledge about the waste generation process and the waste generator. The Facility may elect to perform additional fingerprint tests to attain a higher level of confidence that a full waste characterization has been achieved. If discrepancies are noted between the received waste and the Waste Profile Form, the waste shall be further analyzed using additional fingerprint parameters. Discrepancies that can result in the Facility requiring additional analysis include, but are not limited to, non-conformance with the results of required testing or a change in color, texture, liquid content, or other characteristics that can be observed upon receipt.

The Facility shall follow the additional parameter selection process described in Section 2.2 of the EPA guidance document, Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Wastes (EPA, OSWER 9938.4-03, April 1994).

1.5.5 Additional Analysis for the Landfill

1.5.5.a Overview of Waste Management Procedures in the Permitted Hazardous Waste Management Unit

Upon completion of the fingerprint analysis, and supplemental analyses, if conducted, waste will be transferred to the appropriate staging area. Prior to final disposition of the waste, however, additional analyses may be required to ensure that requirements for the landfill are met.

Analysis necessary for disposal is generally conducted as part of the pre-acceptance procedure (see Section 1.7.2). Appropriate parameters shall be selected from Tables F-2 and F-3. The Facility will use a combination of process knowledge and analytical results to obtain the information needed prior to placing waste in the landfill. The Facility may elect to use other

EPA-approved analytical methods, if it is felt that information other than that obtainable by these methods is needed to manage the waste safely.

The landfill has specific ignitability, reactivity, and compatibility requirements that must be met. Acceptable knowledge and/or waste analysis shall be used to determine whether a waste stream is ignitable, reactive, or incompatible with other wastes to be placed in the landfill. In addition, acceptable knowledge and/or waste analysis shall be used to determine whether the waste stream is compatible with the liner of the landfill. Specific ignitability, reactivity, and compatibility tests shall be conducted as part of the representative sample analysis, and may be repeated in the fingerprint test, for wastes assigned to landfill grids. Management of these wastes is discussed in Permit Attachment B, Section 1.5. Ignitability, reactivity, and compatibility determination is discussed in Section 1.5.1.b, Permit Attachment F1.

The Facility shall conduct compatibility tests as part of the representative sample analysis procedure on an incoming waste stream and other waste streams with which it may be combined.

1.5.5.b Waste Analysis Requirements for the Landfill

Prior to placement of waste in the landfill, it must be determined that the waste meets LDR standards as set forth in 40 CFR § 268, Subpart D. 40 CFR § 268.40 states that a waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:

i. All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste ("total waste standards"); or

ii. The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table ("waste extract standards"); or

iii. The waste must be treated using the technology specified in the table ("technology standard") which are described in detail in 40 CFR § 268.42, Table 4-1, Technology Codes and Description of Technology-Based Standards.

In cases where treatment standards are based on concentrations in the waste extract, the generator shall use toxicity characteristic leaching procedures (TCLP, see 40 CFR § 261, Appendix II) to determine if the waste meets the standards. The sampling and analysis protocols outlined in Sections 1.5 through 1.7 apply to all wastes to ensure compliance with LDR standards. Parameters for analysis shall be based on the exisiting characterization data. All information obtained to document LDR compliance shall be maintained in the Facility Operating Record.

The Facility shall analyze samples obtained from the initial five initial shipments of each incoming waste stream from each generator and compare the results with generator-supplied

data to ensure that there are no discrepancies between the waste received and information supplied by the generator. In addition to other required procedures and analyses, on an annual basis the Facility shall randomly sample and analyze a minimum of 10 percent of incoming waste streams that are to be directly landfilled to verify conformance with the LDR requirements. The sampling shall be spread throughout the year with at least one sample collected each quarter of the year. These additional samples shall be analyzed for the specific regulated hazardous constituents contained in the hazardous waste stream. The data generated from these samples, in conjunction with the generator-supplied data, shall be used to verify conformance with the LDR requirements.

Facility personnel, either at the Facility or at the point of generation, shall collect these samples. The samples shall be split into a minimum of two aliquots. One sample shall be retained and the other sample analyzed for conformance with the applicable LDR requirements. If the results of the analysis indicate that the waste does not conform with the applicable LDR requirements, the retained sample shall be analyzed, generator-supplied information re-evaluated, and an evaluation made of the potential for the waste's variability based on the process that generates the waste stream.

These factors, along with an evaluation of the QA/QC data from the analytical laboratory (both the generator's and the Facility's), shall be used to determine if the subject waste stream is eligible for continued disposal at the Facility or if additional treatment is necessary prior to disposal. Disposal of the waste stream shall be discontinued until the discrepancy regarding compliance with the LDR requirements has been resolved and the generator has demonstrated that its on-going program for compliance with LDR requirements is adequate.

Procedures to meet LDR standards for specific wastes include the following:

- *Lab packs:* Prior to acceptance by the Facility for disposal, hazardous wastes contained in lab packs shall be treated to meet applicable treatment standards for each waste type identified. Required treatment shall be conducted by the waste generator off-site. Lab packs also shall be analyzed to ensure that they do not contain hazardous wastes listed in 40 CFR § 264, Appendix IV. In cases where hazardous lab pack wastes are combined with non-hazardous lab pack wastes prior to or during treatment, the entire mixture shall be treated to meet the most stringent treatment standard for each hazardous constituent before being disposed in the landfill;
- *Ignitable or reactive wastes:* Ignitable or reactive hazardous waste shall be tested to ensure that it will not be placed in the landfill unless the waste has been rendered non-ignitable or non-reactive by treatment. Required treatment shall be conducted by the waste generator off-site;
- *Characteristic wastes:* Generator process knowledge and/or analytical data shall be used to determine whether characteristic wastes meet the applicable treatment standards or to

demonstrate that the waste has been treated by the appropriate specified treatment technology. In accordance with 40 CFR § 268.41, where treatment standards are based on concentrations in the waste extract, generators shipping waste to the Facility shall determine if their wastes meet treatment standards;

- *Reactive wastes:* Reactive wastes shall not be placed in the landfill until they have been rendered nonreactive by treatment. All required treatment shall be conducted by the waste generator off-site;
- *Incompatible wastes:* Incompatible wastes shall be separated when placed in the landfill in separate disposal cells to ensure that they do not combine to cause adverse reactions. These wastes shall be managed to ensure that they meet the requirements specified in 40 CFR §§ 264.313 and 264.17. This management includes placing incompatible wastes in non-adjacent landfill grids and treatment of potentially non-compatible wastes prior to shipment of the waste to the Facility;
- *Hazardous debris:* The Facility will only accept hazardous debris that has been treated and certified to meet the LDR treatment standards specified in 40 CFR § 268.45(b) or (c) by the generator prior to shipment to the Facility; and
- *Listed waste:* Listed waste shall not be placed in the landfill until it has been shown to meet the requirements of 40 CFR § 268.40.

1.5.6 Waste Analysis Requirements for Waste Generated On-Site

The Facility is expected to generate some waste on-site through day-to-day Facility operations, leachate, or releases of hazardous waste to the environment (see Table F-4).

TABLE F-4. POTENTIAL ON-SITE WASTE GENERATION AREAS/ACTIVITIES

Area	Method of Generation	Waste Form[a]
Landfill	Leachate collected in the leachate collection system	L, SL
Stormwater Detention Basin	Contaminated rain water	L, SL
Operations	Personal protective equipment (PPE) contaminated during routine and non-routine operations	S
Site Operations	Spill residues primarily from waste handling operations. Sampling activities.	L, SL, S

a L = Liquid, SL = Sludge, S = Solid

Waste generated on-site shall be assumed to be RCRA-regulated until process knowledge and/or sampling and analysis can be used to determine the actual nature of the waste. Sampling and analysis shall be accomplished in accordance with the requirements of this WAP.

The Facility shall select waste analysis parameters that are appropriate to confirm the identity of waste streams generated at the Facility. The selection of waste analysis parameters will typically be based on knowledge of the physical and chemical processes that produced the waste stream. If there is doubt as to the specific source, the Facility shall use the waste tracking system to identify all possible sources and to develop a list of specific parameters for laboratory analyses. Acceptable knowledge and analytical testing shall be used to ensure compliance with LDR requirements and provide waste compatibility and other information to determine appropriate waste management activities. The Facility shall ensure that all on-site generated waste sent to the landfill meets all LDR treatment standards.

The Facility will produce some waste on-site from day-to-day operations (e.g., paint and paint strippers, laboratory chemicals and equipment, vehicle maintenance wastes). This waste shall be characterized using acceptable knowledge or waste analyses, if the source cannot be definitively determined. If it is hazardous waste and meets all disposal requirements, it may be disposed in the landfill. If it does not meet the requirements for disposal in the landfill or if it is not hazardous waste, it will be sent off-site for disposal.

A release is defined as "any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous waste (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents)". Management protocols for releases that occur on-site are discussed below:

- *Spills and leaks:* Spills and leaks may occur during ordinary Facility operations (e.g., release of fluid from a leaking drum, a spill at any loading or unloading area).

  Provisions for the detection, characterization, and management of spills and leaks are discussed in Sections 5.2.5 and 6.3.5 of the Part B Permit Application text. If spills and/or leaks are identified during inspections, the materials will typically be removed from the system, characterized, and managed appropriately. If necessary, the contaminated area will be sampled to ensure that all contaminated materials are removed;

- *Decontamination rinse water:* Personal protective equipment (PPE), as well as other equipment (e.g., trucks, sampling equipment, industrial absorbents used during spill or leak clean-up, emergency equipment), may become contaminated during the course of site operations such as the handling of wastes, the transfer of waste to another unit, or emergency operations. The water used to rinse this equipment shall be analyzed to determine if it is a hazardous waste and if the equipment has been adequately decontaminated. Provisions for the detection, characterization, and management of

decontamination rinse water are discussed in Sections 6.3.8 of Part B Permit Application text. Rinse water and residues shall be chemically analyzed and handled in an appropriate manner;

- *Run-on/run-off:* Facility storm water control is provided by a network of surface run-on and run-off diversion channels and collection and detention basins. To control the runoff from the Facility, several collection channels and culverts will divert discharges from storm events to a storm water retention basin (*see* Section 2.2 of the Permit Attachment N, Operations and Maintenance Plan). Procedures for management of run-on/run-off are discussed in Sections 2.5.1.6, and 5.4.2 of the Part B Permit Application. Sampling shall be conducted upstream of the storm water detention basin to determine the source of any hazardous constituents that could be introduced into the storm water. Appropriate corrective actions shall be implemented to prevent further contamination during future storm events;
- *Investigation derived wastes (IDW):* IDW may include drilling muds and cuttings from well installation associated with the investigation of spills and releases; soils and other materials from regularly scheduled sampling activities associated with waste management unit and the vadose zone monitoring system; and contaminated PPE. All IDW shall be assumed to be hazardous waste until site or material specific information becomes available. IDW shall be stored near the point of generation in appropriately labeled containers for no greater than 90 days and shall be appropriately analyzed to determine whether it is either a characteristic or listed hazardous waste. Analysis of materials associated with the IDW may be used to characterize the IDW. An example of associated analysis for purge waters from the vadose zone monitoring system would be the final analytical results for the samples collected to satisfy regularly scheduled monitoring requirements;
- *Contaminated soil:* Soil means unconsolidated earthen material consisting of clay, silt, sand or gravel size particles as classified by the US Natural Resource Conservation Service. Soil may also contain a mixture of such materials with liquids, sludges or solids that is inseparable by simple mechanical removal processes and is made primarily of soil by volume based on visual inspection. Contaminated soil is soil impacted by a hazardous constituent release. Soil may become impacted by a release either at the surface or subsurface. If the contaminated soil exists at the surface, the appropriate response is described in the Contingency Plan, Permit Attachment C. If the contaminated soil exists subsurface, the appropriate response will be conducted in accordance with Permit Part 6 or 7, as applicable. Contaminated soils that are managed as hazardous wastes shall be analyzed and managed in accordance with the alternative LDR treatment standards for contaminated soil contained in 40 CFR § 268.49;

- *Air emissions:* Procedures for detection of hazardous air emissions at the landfill are discussed in Sections 2.5.1.8 and 6 of the Part B Permit Application. Procedures to minimize wind dispersal of dust throughout the Facility are identified in Section 5.4.8 of the Part B Permit Application. This section also discusses pollution control systems in the stabilization unit to minimize the release of particulate to the atmosphere. The Facility shall submit an application to NMED for a new source air emissions permit no less than 90 day prior to the start-up of operations; and
- *Leachate:* The definition of leachate is in 40 CFR § 260.10. Leachate as used here refers to landfill fluids collected from the leachate collection and removal system (LCRS), the leak detection and removal system (LCRS), or the vadose zone monitoring system (VZMS) sump.

Leak detection and removal and vadose zone monitoring for landfill leachate are discussed in Sections 2.5.1.3, 2.5.1.4, and 2.5.1.5 of Part B Permit Application and in the Engineering Report in Permit Attachment L. Leachate generated from the landfill shall be managed and removed by enhanced evaporation through leachate recirculation within the landfill. All leachate shall be contained within the lined landfill unit. Leachate fluid shall be analyzed monthly for the underlying hazardous constituents listed in the Table referenced in 40 CFR § 268.40 and for EPA Hazardous Waste Number F039 listed wastes (leachates).

Leachate may also be collected from the vadose zone monitoring wells, but only in the event of a leachate release from the landfill. These wells shall be monitored monthly; if any fluids are present, they shall be sampled and analyzed for all F039 constituents. Samples from the wells shall be analyzed biennially for all the Groundwater Monitoring List constituents identified in 40 CFR § 264, Appendix IX, if water is present.

Leachate sampling and analysis shall follow the sampling and analytical procedures and recordkeeping requirements contained in the VZMS Work Plan (Permit Attachment I) and this section.

1.6 Sampling Plan

The Sampling Plan is based upon the guidance provided in Chapter 9 of SW-846. The overall plan includes the regulatory and technical objectives identified in this WAP. Based upon these objectives, the sampling strategy is intended to ensure that the data collected will minimize the potential for accepting waste that is unsuitable for disposal at the Facility. Modifications to the Sampling Plan to include detailed sampling protocols specific to the site activities will likely be required to reflect the sampling to be performed during operation of the Facility.

The sampling program shall account for all types of waste constituents and waste matrices that may be encountered. The Facility shall identify the protocols by which sample locations will be

selected and the methods most appropriate for collecting samples from the different waste streams.

The latest revision of SW-846,ASTM or other approved methods shall be used, and site procedures shall be revised as necessary to incorporate new requirements.

General sampling methods and collection techniques are discussed in Section 1.6.1. Section 1.6.2 contains specific sampling procedures. Section 1.6.3 and Section 1.6.4 provide information on sample location and sample type, respectively. Section 1.6.5 discusses sampling QA/QC procedures. Sections 1.6.6 and 1.6.7 present requirements regarding sample preservation, volume and holding times, and equipment decontamination, respectively.

1.6.1 Sampling Methods

Sampling methods shall follow Appendix I of 40 CFR, Part 261 unless a more appropriate method is identified. Table F-5 lists general waste matrices and appropriate sampling methods that will be used at the Facility.

Matrices that will be sampled include viscous liquids/sludges, crushed/powdered material, rock/rock-like material, soil, and fly-ash-like material. Liquids are prohibited from disposal in the landfill. The methods and equipment used for sampling wastes must be appropriate for the form and consistency of the material to be sampled. The matrices will be sampled using a variety of sampling tools (see Table F-5), including, but not limited to, a dipper (sludge/viscous liquid), thief (sludge/viscous liquid), scoop (sludge, powdered material, rock/soil material, fly-ash material), shovel (powdered material, rock/soil material), auger (soil/fly-ash-like material) and tube sampler (fly-ash like material and liquids). The Facility shall select the appropriate sampling method from Table F-5 based upon the sample matrices, chemical constituents within the sample, and sampling conditions. If a sampling method not presented on Table F-5 would be more appropriate for the specific matrices to be sampled given site-specific conditions or if the procedures presented below must be modified, an alternative method may be used. If an alternative method is used, the sampling method shall be well documented, justified, placed in the Operating Record, and approved by NMED prior to implementation.

TABLE F-5. SAMPLING METHODS

Waste Matrix	Sampling Method	Sampling Equipment
Sludge	ASTM D140-70	Scoop
Crushed or powdered material	ASTM D346-75	Scoop, shovel, tube sampler
Soil or rock-like material	ASTM D420-69	Scoop, shovel, auger
Soil-like material	ASTM D1452-65	Scoop, shovel, tube sampler
Fly ash-like material	ASTM D2234-76	Tube sampler, auger, scoop, shovel

Sampling equipment shall be compatible with waste, and shall generally be made of glass, steel, brass or Teflon. Decontamination procedures shall be conducted in accordance with Permit Section 8.3.8.

1.6.1.a Sampling with a Scoop/Shovel

Scoops/shovels are used to sample rock/soil-like, solid or powdered matrices. The following general process shall be used to sample with scoops/shovels:

i. clean/decontaminate the sampler; and

ii. obtain a full cross section of the waste material using the scoop or shovel that is large enough to contain the waste collected in one cross sectional sweep.

1.6.1.b Sampling with an Auger

Augers are used to sample relatively hard packed solid waste material or soils. Augers are spiral drilling blades attached to metal shafts which are rotated downward through sample material, allowing sample to be drawn from the sample matrix by moving upward along the auger spirals or the sample to be collected in the auger bucket. The following general process shall be used to sample with an auger:

i. clean/decontaminate the sampler; and

ii. drill downward, using the auger, into the waste material, collecting waste moving upward along the auger blades or to accumulate in the auger bucket. Remove the waste sample from the auger and place the waste in in an appropriate sample container.

1.6.1.c Sampling with a Tube Sampler

Tube samplers are used to collect soil/solid samples, and are generally glass or steel tubing that can be inserted into relatively compact matrix. (Modified tube samplers, however, can be used for liquid sampling.) Following insertion of the tube, and tube is extracted with the sample contained in the inserted tube. The following general process shall be used to sample with the tube sampler:

i. clean/decontaminate the sampler;

ii. lower/insert the tube into the waste to the desired depth;

iii. when the desired depth is reached, slowly withdraw the tube, taking care to retain as much sample with the tube as possible; and

iv. extract sample into the appropriate sample container.

1.6.2 Sample Collection Procedures

This section discusses the general sampling procedures for each type of sample to be collected at the Facility, as presented in Table F-6. It is recognized that the specific sampling that will take place at the Facility may differ from general procedures included herein based on the specific conditions, and approval by NMED is required before revisions may be implemented. Additionally, selection of sample locations (Section 1.6.3) and sample types (Section 1.6.4) for on-site samples to be collected are addressed.

TABLE F-6. ON-SITE SAMPLE COLLECTION ACTIVITIES

Sample Type	Matrix	Collection frequency	Comments
Fingerprint sample	All incoming sludge and solids; debris waste will not be fingerprinted	One per shipment for bulk shipments 1/10 drums for drummed waste	Table F-2 defines base fingerprint analysis required
Annual sample	All incoming sludge and solids; debris waste will not be sampled	One sample annually for each waste stream that underwent representative sampling prior to initial shipment	Table F-1 defines base representative analysis required. Sampling to be performed at the generator site.

Sample Type	Matrix	Collection frequency	Comments
Spills/releases	Spilled waste and contaminated material (sludge, liquid, soil)	Each release	For Hazardous Waste determination
Landfill input	All incoming sludge and solidified solid waste to landfill except debris	Initial five shipments of each waste stream from each generator and subsequent random sampling of waste directly disposed in the landfill.	To verify LDR status
On-site waste	1. Treated waste 2. Day-to-day operations 3. Releases 4. Run-on/runoff 5. Investigation-derived waste 6. Soil 7. Air 8. Leachate/sludges from landfill	1,2. When acceptable knowledge is not available 3,4. See Vol. II Attachments 5. Each container 6. Contingency Plan implementation or other spill response 7. See Vol. II Attachments (Permit Application dated October 2011) 8.Sampled monthly	To determine hazardous waste and LDR status. See Table F-5 for specific waste matrices generated by on-site activities

1.6.2.a Fingerprint Sampling

Fingerprint sampling will be conducted for all in-coming waste, except for debris waste. Each container of debris waste shall be visually inspected as shall each drum and roll-off container, regardless of waste matrix. Matrices that will undergo fingerprint sampling include sludges and solids arriving in containers such as roll-offs and drums/containers. Refer to Table F-6 and Section 1.4.3.a for sampling frequency and waste analysis.

Trucks delivering bulk solid material (e.g. in roll-off containers) will be sampled using sampling equipment appropriate for solids (see Section 1.6.1). A surface sample will be collected from the front one-third area of the truck, middle one-third area, and rear one-third area of the bulk; samples will then be composited (see Section 1.6.4). Vertical waste composition will be determined, as possible, by collecting an additional sample from depths greater than

approximately 2 feet below the surface of the waste at each of the three sample locations using the appropriate sample collection tool (e.g., auger); these three samples will be composited with the first three samples. All loads will be visually inspected during unloading. If the load exhibits different color, texture, or wetness, then samples from these areas will also be collected and included in the composite sample. Separate discrete samples shall be collected from waste containers that contain volatile organic compounds.

Sample methodology for drummed waste will depend on the sample matrix. A single sample, collected through as much depth of waste container as possible, shall be collected. The location of sample collection is discussed in Section 1.6.3.

The Facility shall describe the sampling method used for fingerprint waste sample collection, including but not limited to sample collection technique, sample type, sample representativeness, sample volume, sample containers, sample preservation, and chain-of-custody,, and shall place this information in the Operating Record.

1.6.2.b Annual Sampling

Wastes that underwent representative sampling prior to initial waste shipment shall undergo annual sampling to confirm waste composition. The Facility shall assess the representative sampling procedure prior to initial waste acceptance, and this same representative sampling procedure shall be used for annual sampling. Annual sampling shall follow the representative sampling process performed prior to initial waste shipment; if the process is modified, the Facility shall re-assess the sampling process to ensure collection of a representative sample, and place this assessment in the Operating Record.

1.6.2.c Spills/Releases

See Section 1.6.2.e.

1.6.2.d Landfill Input

All incoming waste streams to the landfill shall be sampled to ensure continued compliance with LDR requirements. The initial five shipments of each waste stream from each generator shall be sampled and subsequent sampling shall be conducted on an annual basis. The Facility also shall randomly sample and analyze a minimum of 10 percent of incoming waste streams that are to be directly disposed in the landfill to verify conformance with the LDR requirements. These additional samples shall be analyzed for the specific regulated hazardous constituents contained in the hazardous waste stream. The data generated from these samples, in conjunction with the generator-supplied data, shall be used to verify conformance with the LDR requirements. Sampling procedures shall follow those presented in Sections 1.6.2.a, as applicable.

1.6.2.e On-Site Generated Waste

Several wastes may be generated on-site that require sampling and analysis (see Table F-4). Specifically, treated waste, day-to-day generated waste (e.g. personal protective equipment), releases of wastes, run-on/run-off, investigation-derived waste, contaminated soil, air emissions, and leachate/sludges from the landfill are considered to be on-site generated waste.

1.6.3 Selection of Sample Locations

The Facility shall collect samples from containers and roll-off boxes using either random (i.e., probability) or biased (i.e., authoritative) sampling methods. Random sampling methods shall be used to select drummed containers for fingerprint analysis. All other on-site sampling, except for annual sampling of waste directly disposed in the landfill (i.e., 10 percent of the waste) must be sampled; therefore, random selection of waste containers to be sampled is therefore not applicable. However, the Facility shall collect random samples from within the waste to be sampled for non-fingerprint or annual analysis (e.g., leachate, landfill input), if the wastes are anticipated to be fairly homogeneous. A biased sampling method shall be used to select roll-off waste sample locations (biased samples shall be collected if the wastes are expected to be or are found to be heterogeneous). For some waste streams, the Facility may use both sampling techniques, as determined appropriate by the Facility and justified in the Operating Record.

With random sampling, every unit in a population (e.g., every drum from a given waste stream in a shipment) has a theoretically equal chance of being selected for sampling. Consequently, data generated by these samples are unbiased estimators of the range of concentrations in a population. If a sufficient number of samples are collected, they should be representative of the average concentrations within the entire population. For example, in the case of drums, those drums to be fingerprint sampled will be numbered, and numbers shall be randomly drawn to determine those containers that will be sampled.

With biased sampling, a preference is given to selecting only certain units in a population. This technique requires the sampler to use discretion and to have knowledge of the waste. The sampler selects the sample locations from areas where contamination is known or suspected (e.g., the sampler could collect a biased sample from areas where there is layering or differences in color or consistency). Also, the Facility may use a field screening instrument to bias the sample location toward locations where higher contaminant concentrations are suspected to be present (e.g., a photoionization detector could be used to select locations having higher concentrations of VOCs). EPA-approved ASTM method D140-70 identifies the procedure for estimating the number of containers that should be sampled. Samples collected from roll-off bins, for example, may include biased sampling if areas of obvious discoloration, and other pertinent information, are noted.

The Facility shall document the sampling technique that is used to locate each waste sample collected pursuant to this WAP and maintain this information in the Facility Operating Record.

1.6.4 Sample Types

Samples of the waste will be collected as either composite or grab samples. It is possible that the Facility may modify or augment the procedures discussed below for the collection of composite and grab samples before the Facility becomes operational; if so, these revisions must be approved by NMED prior to implementation.

In composite sampling, a number of samples are initially collected from a waste and blended into a single sample which is then analyzed for the constituents of concern. Composite sampling is acceptable for homogeneous samples and tends to minimize sample variation between samples. This allows for a reduction in the number of samples that must be analyzed to verify the contents of a waste shipment. Composite samples can also be obtained from a waste that is stratified; however, the composite shall only be made from samples obtained from the same strata within the waste. Composite samples shall be collected using clean sampling equipment and such samples will be blended, unless VOCs are present, before analysis. If VOCs are present, separate discrete grab samples shall be collected for VOC analysis. Grab sampling shall be used to obtain samples of heterogeneous wastes.

1.6.5 Sampling QA/QC

QA sampling procedures shall be conducted in accordance with the guidance provided in EPA SW-846 and EPA's Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste. The QA requirements shall be applicable to on-site sampling (e.g., leachate collection system samples) as well as to the sampling of incoming waste shipments. This program is necessary to ensure that decisions regarding the acceptance and disposition of waste are based on valid and documented data. Additional QA procedures associated with sampling and analysis determined prior to initiation of on-site sampling will be included in the Operating Record.

The sampling QA program shall include the following:

- training requirements for personnel responsible for sample collection;
- chain-of-custody protocols for tracking samples;
- QA review of procedures to ensure proper use of equipment;
- protocols for equipment maintenance;
- identification of required sampling techniques for specific media;
- field sampling QC procedures; and
- documentation of sampling locations.

Deviations from the approved sampling program, sampling methods, or chemical analytical methods shall be documented and reviewed by personnel responsible for site QA. NMED shall

be notified in writing of the QA exceptions within seven days of the occurrence and measures shall be taken to correct the problems as soon as practicable.

1.6.5.a Training Requirements for Personnel Responsible for Sample Collection

All personnel and supervisory staff responsible for collecting waste samples for screening and chemical analysis shall be trained in the use of all sampling methods and equipment used at the site.

1.6.5.b Chain-of-Custody Protocols for Tracking Samples

The integrity of the sampling/analytical protocol shall be maintained by following chain-of-custody procedures from the point of sample collection through analytical data reporting to sample disposal. The possession and handling of samples shall be traceable from the time of collection through analysis and final disposition.

A sample is considered to be in a person's custody if it is:

- in a person's physical possession;
- in view of the person after taking possession; or
- secured in a container sealed by the responsible person so that it cannot be tampered with during transport to the designated destination or during storage after being secured by that person in an area of restricted access.

The sampler shall place a sample label on each sample container. The label shall include the following information:

- sample number, a unique identifier that is traceable to the waste stream and shipment;
- name of collector (sampler);
- date and time of collection; and
- place of collection.

Labels shall be affixed to sample containers prior to or at the time of sampling and shall be filled out at the time of collection.

Sample chain-of-custody seals are required if the sample is designated to leave the possession of Facility personnel for transport to an analytical laboratory. The seal shall include the same information as the sample label. The seal shall be attached in such a way that it is necessary to break it in order to open the sample container. In addition, chain-of-custody seals shall be affixed to sample storage containers in a similar manner in order to prevent tampering prior to shipment from the Facility to off-site analytical laboratories. Samples and storage containers which require seals must be sealed prior to leaving the possession of Facility personnel.

To establish the documentation necessary to trace sample possession from the time of collection, a chain of custody record shall be filled out and accompany every sample. A sample chain of custody record is provided in Permit Attachment F3.

If the sample is to be shipped off-site for analysis, it shall be accompanied by a sample analysis request sheet. The sample analysis request sheet will include the information necessary to identify the sample and the analyses requested by the Facility. Samples shipped off-site for analysis shall be packaged and shipped in accordance with DOT transportation requirements.

Laboratory samples shall be maintained in a secure area and retained until holding times expire, as listed in SW-846. After the holding time has expired, samples shall be disposed at the Facility with compatible waste batches. Records of the date the samples are removed from storage and the date and method of disposal shall be maintained at the Facility until completion of post-closure care. In cases where samples are not analyzed within their holding times, the Facility shall resample.

1.6.5.c QA Review of Procedures to Ensure Proper Use of Equipment

Standard operating procedures shall be developed for the selection, use, decontamination, and storage of sampling equipment used to characterize waste shipped to the Facility. The standard operating procedures shall include the sampling equipment to be used, instructions for use, and the applications for use of the equipment for collection of samples from specific media and types of shipping containers. The procedures and QA standards for waste sample collection shall be included in the standard operating procedures.

1.6.5.d Protocols for Equipment Maintenance

The protocols for equipment maintenance shall be included in the standard operating procedures. Protocols will be developed, as described in the preceding paragraph, for use, decontamination, and storage of equipment. Protocols for equipment maintenance shall be included in the standard operating procedures (See Section 1.6.7 for general decontamination requirements).

1.6.5.e Identification of Required Sampling Techniques for Specific Media

The sampling methods and equipment used for collecting samples from specific media shall be selected in accordance with the guidelines included in 40 CFR, Part 261, Appendix I, and in the EPA guidance manual, Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste, Chapter 2. Alternative sampling methods may be used with prior approval of NMED.

1.6.5.f Field Sampling QC Procedures

Blank and duplicate samples shall be obtained during waste characterization sampling to confirm that sample collection and handling procedures meet the QA/QC standards outlined in the standard operating procedures and data quality objectives included in the Facility sampling manual. Duplicate samples shall be collected at a minimum frequency of 10 percent (1 for every 10 samples). Field blanks and equipment blanks shall be collected at a minimum frequency of 5 percent (1 for every 20 samples). Trip blanks shall be included with all sample kits where samples are sent to off-site laboratories for chemical analysis. The field QA samples are described below:

- *Field blanks:* Field blanks are prepared in the field by filling a clean container with pure de-ionized water and appropriate preservative (if required for a specific analytical method). Contaminants found may indicate airborne contamination, contaminated equipment, or cross-contamination during sampling. A minimum of one field blank shall be collected for every 20 waste samples collected;
- *Trip blanks:* Trip blanks are sample containers that are prepared with an inert material such as de-ionized water and carried into and out of the field, but not opened at any time during the sampling event. Contaminants detected in the trip blank may indicate that the source where the sample was prepared or the container that transported the trip blank was contaminated. A trip blank shall accompany all sample shipping containers sent from and to off-site laboratories;
- *Equipment blanks:* Equipment blanks are prepared in the field prior to sampling by running de-ionized water over sampling equipment and placing it into a clean sample container. Contamination in this type of sample will indicate that the sampling equipment is contaminated. A minimum of one equipment blank shall be collected for every 20 waste samples collected; and
- *Field duplicates:* Field duplicates are independent samples that are taken from the same location at the same time and are used to measure the effectiveness of obtaining representative samples. A minimum of one field duplicate shall be collected for every 10 waste samples collected.

1.6.5.g Documentation of Sampling Activities

Sampling activities, including observations and field procedures, shall be recorded on appropriate forms and kept on file at the Facility. Copies of the completed forms shall be maintained in a bound and sequentially numbered file. The records of waste stream sampling activities shall include:

i. the date;

ii. the time of arrival and departure;

iii. weather conditions (including estimated temperature and wind direction);

iv. the name of the sample collector;

v. daily activities and times sampling was conducted;

vi. a description of the sampling methods used

vii. observations;

viii. a record of samples collected, with sample designations and locations/containers specified;

ix. field monitoring data, including health and safety monitoring;

x. a list of equipment used and calibration records, if appropriate;

xi. a list of additional data sheets completed; and

xii. the signature of personnel completing the field record.

Each sample collected during waste stream sampling activities shall be identified by a unique sample designation. The sample designation shall be included on the sample label. QA/QC samples shall be designated with a "Q" (QA/QC samples) at the end of the sample designation, followed by one of the following to indicate the type of QA sample:

- "D" will be used for a duplicate sample;
- "E" will be used for equipment rinsate blanks;
- "F" will be used for field blank samples; or
- "TB" will be used for field trip blanks.

This coding shall be used to assure that duplicates and blanks can be easily tracked by the Facility for QA purposes.

1.6.6 Sample Preservation, Volumes, and Holding Times

Table F-7 presents general preservation, container, and holding time information for samples collected. EPA SW-846 guidelines have been used to determine these general requirements, although these may be modified or augmented to account for specific conditions, waste-specific requirements, waste-container compatibility considerations, or additional waste parameters for analysis. Method-specific sample volumes and containers appropriate for the sampling event will be determined by the Facility. Prior to any sampling event, sample container labels shall be prepared and affixed to sample containers, and all sample containers shall be certified clean by the supplying laboratory. Sample labels shall identify, at a minimum, sample number, date, sampler, matrix, analyses to be performed, and sample preservation. Once collected, samples

shall be placed immediately into the shipping container (i.e., cooler), and chain-of-custody documentation shall be filled out (see Section 1.6.5.b).

TABLE F-7. GENERAL CONTAINER, HOLDING TIME, AND PRESERVATIVE REQUIREMENTS BY SAMPLE MATRIX

Sample Matrix	Concentration	Fraction	Volume	Container Type [a]	Preservative	Holding Times
Inorganics						
Soil, Sludge, Sediment, and Residue	Low/Medium	Total metals	6 oz	F or G	Cool to 4°C	6 months
Organics						
Soil, Sludge, Sediment, and Residue	Low/Medium	VOCs	240 mL	D	Cool to 4°C	14 days
		SVOCS	3 oz	F or G	Cool to 4°C	14 days for extraction, 40 days after extraction to analysis
		Petroleum hydro-carbons	3 oz	F or G	Cool to 4°C	15 days for extraction, 40 days after extraction to analysis

Note: The above table is general in nature and may be modified or augmented, so long as the requirements are congruent with SW-846 requirements.

a Container types are as follows:

D = 120-mL glass septum vial with teflon-lined, white poly cap or Encore® sampler or equivalent

F = 8-oz wide-mouthed glass jar with teflon-lined black poly cap

G = 4-oz wide-mouthed glass jar with teflon-lined, black poly cap

1.6.7 Equipment Decontamination

Reusable sampling equipment shall be decontaminated prior to use in accordance with Permit Section 8.3.8. In general, decontamination of sampling equipment typically includes initial scrubbing with a biodegradable commercial detergent, followed by a tap water rinse and subsequent de-ionized water rinse. The decontamination process shall include wiping or scrubbing of sampling equipment to remove surface residue, followed by detergent wash, rinse, a second detergent wash, and second rinse. Modifications to this process may be required to account for site/contaminant conditions, and may take place so long as the decontamination procedure is well documented and appropriate supporting information is placed in the Operating Record.

1.7 Analytical Methods

Analytical methods which the Facility will use for specific tests are identified in the waste analysis tables (Tables F-1 through F-3). All analytical methods used in conjunction with this WAP must be EPA-approved methods or methods required by hazardous waste regulations. If there is no equivalent EPA-approved method, an ASTM method or other NMED- approved method may be used. If the Facility or a generator wishes to use alternate test methods, the Facility or generator must first demonstrate to the NMED that the proposed method is equal to, or better than, the corresponding methods prescribed in 40 CFR § 261 or § 264, in accordance with 40 CFR § 260.21. Such demonstration shall be provided through a Permit modification request. All proposed alternative methods must achieve the appropriate data quality objective.

This request must include the following information:

i. a statement of the need and justification for the proposed action;

ii. a full description of the alternative method (i.e., a standard operating procedure) including all procedural steps and equipment used in the method;

iii. a description of the types of wastes, or waste matrices, for which the proposed method may be used;

iv. comparative analytical data obtained from using the proposed method with those obtained from using the corresponding methods;

v. a demonstration that the proposed analytical procedure is equal to, or superior to, the corresponding methods in terms of its sensitivity, accuracy, and precision (i.e., reproducibility);

vi. an assessment of any factors which may interfere with or limit the use of the proposed method; and

vii. a description of the QA/QC procedures necessary to ensure the sensitivity, accuracy, and precision of the proposed method.

An example of a non-EPA method required by hazardous waste regulations are the ASTM tests specified in 40 CFR § 264.314(e)(2) to determine the presence of non-biodegradable sorbents.

Section 1.7.1 identifies the duties of the laboratory manager. Section 1.7.2 identifies the contents of the laboratory QA/QC plan. Requirements for off-site laboratories used by the Facility are included in Section 1.7.3.

1.7.1 Duties of the Laboratory Manager

The on-site laboratory manager shall have the following responsibilities to ensure an effective quality assurance program:

i. ensuring that laboratory personnel are adequately trained to perform sampling and analytical procedures and in safety procedures;

ii. ensuring that equipment and instrumentation under his or her control are calibrated and functioning properly;

iii. coordinating internal and external assurance audits;

iv. reviewing procedures and QA plans of outside laboratories used. QA/QC practices shall be considered during the selection of independent analytical laboratories. QA/QC practices that will be reviewed include written procedures, certification, internal and external audits, personnel training, and chain-of-custody procedures; and

v. development, updating, and implementation of the laboratory QA plan.

1.7.2 Facility Laboratory QA/QC Plan

Prior to beginning operations, the Facility shall develop procedures that will comprise the laboratory QA/QC plan. The Facility shall develop a QA manual for operation of the on-site laboratory. The manual shall be submitted to NMED for review no less than 90 days prior to the intial receipt of waste.

The results of chemical analysis of waste samples generated by the on-site laboratory may not be used as part of the waste acceptance evaluation process prior to NMED's review of the QA manual.

The overall QA objective for measurement data is to ensure that data of known and acceptable quality are provided. All measurements will be made to yield accurate and precise results representative of the media and conditions measured. QA objectives for precision, accuracy, and completeness shall be established for each measurement variable, where possible, and shall be included in the QA manuals of the on-site and off-site laboratories where waste samples will

be submitted for chemical analysis. The laboratory procedures, practices, and qualifications shall be included in the QA manual for each laboratory.

The laboratory QA manual shall be based on guidance provided in EPA's Requirements for Quality Assurance Project Plans for Environmental Data Operations (EPA QA/R-5). As such, the plan shall address the following key elements in compliance with EPA QA/R-5: project organization; laboratory quality assurance organization; data quality objectives and criteria; employee training and certification requirements; laboratory analytical methods; quality control requirements; laboratory equipment and instrumentation calibration, testing, inspection, and maintenance; QA/QC of suppliers and vendors; data acquisition requirements; data management; data review, validation and verification; and, reconciliation with quality objectives and criteria. These elements and other procedures included in this plan are discussed in the following sections:

i. laboratory quality assurance;

ii. equipment calibration;

iii. laboratory QA/QC samples;

iv. laboratory QC;

v. analytical procedures; and

vi. laboratory maintenance.

1.7.2.a Laboratory Quality Assurance

The Facility laboratory and each off-site laboratory shall maintain an internal quality assurance program, as documented in its laboratory quality assurance manual. The laboratories shall use a combination of blanks, surrogates, duplicates, MS/MSD (matrix spike/matrix spike duplicate) laboratory control samples, and BS/BSD (blank spike/blank spike duplicate), to demonstrate analytical QA/QC. Control limits shall be established for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The specific procedures to be completed and the laboratory control limits shall be included in the QA manual for each laboratory.

1.7.2.b Equipment Calibration

The laboratory equipment calibration procedures, calibration frequency, and calibration standards shall be conducted in accordance with EPA (or equivalent method) specified test methodology requirements and will be documented in the laboratory's QA manual. All instruments and equipment used by the laboratory shall be operated, calibrated, and maintained according to manufacturers' guidelines and recommendations. Operation, calibration, and maintenance shall be performed by personnel who have been properly trained in these

procedures. A routine schedule and record of instrument calibration and maintenance shall be kept on file at the laboratory.

1.7.2.c Laboratory QA/QC samples

Analytical procedures shall be evaluated by analyzing reagent or method blanks, surrogates, MS/MSDs, BS/BSDs, and/or laboratory duplicates, as required or appropriate for each method. The laboratory QA/QC samples and frequency of analysis to be completed shall be in accordance with EPA or equivalent method protocols and shall be included in the QA manual for each laboratory.

The laboratory QA manuals and procedures shall incorporate data quality objectives (DQOs) to verify that waste characterization data obtained by the methods established in this WAP meet regulatory requirements with regard to regulatory compliance and Facility waste management requirements. The following DQOs are established for the sampling and analysis of waste managed by the Facility:

i. identify and quantify the hazardous constituents in the waste to ensure compliance with 40 CFR § 264 and the requirements of the Facility permit, and

ii. compare the contaminant concentrations in the waste with the specified characteristics of 40 CFR § 261 in order that the waste may be managed in accordance with Facility requirements.

To ensure that the laboratory data quality objectives are met, the following analyses shall be completed in the laboratory to monitor the analytical process:

- *Laboratory duplicate samples*: Laboratory duplicate samples will be analyzed to monitor for intra-laboratory precision of data generated. These samples shall be analyzed at a rate of no less than 5 percent (1 for every 20 samples) of the total samples with at least one duplicate if fewer than 20 samples are analyzed for any particular parameter;
- *Spiked samples (Matrix Spike/Blank Spike):* Spiked samples shall be analyzed to monitor analytical precision. Spiked samples will be tested on no less than a five percent (1 for every 20 samples) basis for any particular parameter. At least one spiked sample shall be run if fewer than 20 samples are analyzed;
- *Control charts:* Control charts shall be utilized to establish laboratory control limits to monitor and review the accuracy of the data generated as a result of spike analyses. Control limits reflect long-term data accuracy trends and must be modified as new data are acquired;
- *Method/reagent blanks:* Method/reagent blanks shall be prepared using samples of purified water or reagents that shall then be subjected to the entire sample analytical

procedure to monitor potential contamination of samples due to contamination in the laboratory or laboratory equipment. Method or reagent blanks shall be included with each set of samples;

- *Laboratory equipment blanks:* Laboratory equipment blanks shall be analyzed to monitor potential contamination of samples due to improper or ineffective cleaning of equipment. These samples shall be analyzed at a rate of no less than 5 percent (1 for every 20 samples) of the total samples;
- *Quality control samples:* QC samples shall be analyzed to monitor for accuracy of data generated. EPA QC samples or samples purchased from a reputable independent source shall be submitted to off-site laboratories as blind samples for chemical analysis of a set of selected analytes approved by NMED at the beginning of the Facility operation and also at regular intervals during the Facility operating life;
- *Surrogates:* Surrogates shall be analyzed in accordance with EPA guidelines for organics analysis. Surrogate recovery is a measure of the effectiveness of the analytical process. Surrogates shall be tested on no less than a 5 percent (1 for every 20 samples) basis for any analysis of organic compounds;
- *Calibration standards and devices:* Calibration standards and devices shall be used in accordance with the manufacturers' recommended guidelines to calibrate laboratory instrumentation; and
- *Internal standards:* Internal standards prepared in the laboratory shall be referenced against external standards to measure accuracy.

Laboratory QC procedures shall be included in the laboratory QA manuals prepared by each laboratory.

1.7.2.d Laboratory Quality Control

QC objectives for the analytical data are a means of checking and controlling the sources of error in analytical data results. The criteria for data evaluation include assessing the data accuracy, precision, completeness, representativeness, and comparability. The criteria are described below:

- *Accuracy:* Accuracy is a measure of the error between chemical analytical results and the true sample concentrations. Accuracy is a measure of the bias in a system and will be expressed as the percent recovery of spiked samples. Accuracy will be presented as percent recovery and shall be calculated as follows:

  $$\%R = (S-U)/Csa \times 100$$

  Where %R = percent recovery

S = spike sample analytical result

U = sample analytical result

Csa = known or actual spike concentration

The DQOs for accuracy for each analytical method shall be presented in the laboratory QA manual.

- *Precision:* Precision is a measure of data variability. Variability can be attributed to sampling activities and/or chemical analysis. Relative percent difference (RPD) will be used to assess the precision of the sampling and analytical method and shall be calculated as follows:

  RPD = [C1 - C2/(C1 + C2)/2)] x 100

  Where RPD = relative percent difference

  C1 = larger of the two concentrations

  C2 = smaller of the two concentrations

  The DQOs for precision for each analytical method shall be presented in the laboratory QA manual.

- *Completeness:* Completeness shall be evaluated to assess whether a sufficient amount of valid data is obtained. Completeness is described as the ratio of acceptable measurements. Completeness will be calculated as follows:

  C = (Number of samples having acceptable data)/(total number of samples analyzed) x 100%

  where C = completeness

  The DQOs for completeness shall be presented in the laboratory QA manual.

- *Representativeness:* Representativeness is a qualitative parameter related to the degree to which the sample data represent the specific characteristics of concern. Procedures in sample collection will be implemented to assure representative samples, such as repeated measurements of the same parameter from the same waste stream in the same shipping container over several distinct sampling events. Any procedures or variations that may affect the collection or analysis of representative samples shall be noted and the data qualified as appropriate.

- *Comparability:* Comparability is a qualitative parameter related to whether similar sample data can be prepared. To assure comparability, analytical results shall be reported in appropriate units for comparison with other data (such as past studies or clean-up standards), and the standard collection and analytical procedures included in

this WAP shall be implemented. Any procedures or variations that may affect comparability shall be noted, and the data will be qualified as appropriate.

1.7.2.e Analytical Procedures

Specific QA/QC procedures to be used for sampling, chain-of-custody, calibration, analytical methods, reporting, internal QC, audits, and preventive maintenance shall be included in the laboratory QA manual.

Laboratory procedures and methods to be used shall contain all of the information presented in the EPA document, SW-846, for each method. The format for each method shall be similar to that used in SW-846. If there is no appropriate SW-846 method ASTM or other approved methods will be employed. The laboratory procedures and methods also shall include the following:

- *Scope:* A description of the scope of applicability of the procedure;
- *Principal:* A brief description of the steps to be taken and/or the theory involved in the laboratory analysis;
- *Interference:* A description of known interfering agents that would cause difficulty in the laboratory analysis;
- *Apparatus:* A listing or description of equipment required to perform the laboratory analysis;
- *Reagents:* A listing of the reagents required, a description of the steps involved in preparing the reagents, and instructions on storage requirements and retention times;
- *Procedures* (instructions): An enumeration of the sequence of activities to be followed. The topics include sample preparation or pretreatment, sample storage requirements, instrument set-up, standardization or calibration, sample analysis, calculations, and glassware-cleaning procedures. The procedure shall include any precautions, explanation, or clarifications needed to properly perform the analysis. These include safety precautions, the frequency of standardization required, the acceptance criteria or procedures for determining the acceptability of standard curves, clarification or special techniques critical to the analysis, and the procedure the analyst uses to determine the reliability of sample results based on the standard curves;
- *Quality control requirements:* A listing of the QC checks to be performed and the acceptance criteria used to evaluate the QC data; and
- *Reference:* A listing of the publications from which the information was derived in preparing the laboratory method. All references pertaining to these documents. As a rule, laboratory methods are derived from the following publications:

- Standard Methods for the Examination of Water and Wastewater, American Public Health Association;
- Annual Book of Standards, American Society for Testing and Materials;
- Methods for Chemical Analysis of Water and Waste, US Environmental Protection Agency;
- Test Methods for Evaluating Solid Waste, SW-846, US Environmental Protection Agency;
- National Functional Guidelines for Organics Data Review; and
- Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses.

Editions used shall be those currently specified in 40 CFR, as updated.

1.7.2.f Laboratory Maintenance

The analytical laboratory shall have in place a procedure that details the steps to be taken to calibrate and standardize instruments to ensure that the analytical data produced are accurate. Records of all calibrations, preventive maintenance, and service calls shall be available upon request from the laboratory files. Calibration procedures shall follow the method procedures outlined in the EPA document, SW-846, or the ASTM Standards.

A procurement procedure that identifies methods to be used to document and control the purchase of materials, parts, and services shall be implemented by the laboratory and be presented in the laboratory QA manual. The procedure shall include identifying the quality of laboratory chemicals and equipment, management approval of procedure items, inspection of shipments for compliance with requirements, and isolation of nonconforming items to be returned to vendors. Equipment quality shall conform to the requirements specified in the most current edition of the EPA document, Handbook of Analytical Quality Control in Water and Wastewater Laboratories, the Federal Register, or other regulatory agency publications. This procurement procedure shall serve to ensure that routinely required spare parts are readily available.

1.7.3 Requirements for Off-Site Laboratories

The Facility shall document that the following conditions are met for each off-site laboratory performing waste analyses for the Facility:

i. the laboratory used by the Facility shall be different from the laboratory used by the generator;

ii. the laboratory must be approved by the Facility;

iii. the laboratory must use the analytical methods identified in Section 1.5;

iv. if there is more than one analytical method for a specific test identified in Section 1.5, the laboratory must follow the guidance in Chapter Two of the current version of EPA document SW-846 to determine the appropriate analytical method; and

v. the laboratory must follow the QA/QC requirements described in this WAP.

1.7.4 Laboratory Requirements for Foreign Generators

The Facility shall ensure and document that all laboratory analyses provided by foreign generators is performed by a laboratory accredited or certified for the appropriate hazardous waste field of testing (FOT) by an authority using the EPA's National Environmental Laboratory Accreditation Conference standards.

1.8 Waste Tracking

To identify and track the waste managed at the Facility, a Facility-specific number shall be assigned to each waste stream and to each shipment within that waste stream. Each waste shipment shall be tracked using a unique alphanumeric designation. This designation shall identify the generator, a sequential number specific to the shipment, substance and source and the delivery date (or, in the case of site-generated waste, the date the waste entered the system). An example is presented below:

ABC-0001-073113

where ABC identifies the generator

0001 identifies the waste stream, source, and shipment

073113 is the date the waste was delivered

The waste numbering system will assist in the tracking of waste as it moves through the Facility. The number shall be recorded on:

i. all incoming paperwork from the generator;

ii. samples received from the generator;

iii. samples collected on-site (that also shall have unique identifiers; and

iv. site-generated records.

The date shall not be recorded until the waste actually arrives on-site. This numbering system will allow the Facility to track a specific waste with regard to the final disposition of the waste. In addition, assigning a unique designation to each generator and a unique number to each waste stream from that generator shall make possible determining the amount of waste from a given waste stream that has been received by the Facility. Individual shipments from within the waste stream shall receive an additional unique identifier to enable the Facility to tie information back

to the specific shipment as well as to the waste stream to allow the Facility to locate the current position of the waste at the Facility, including the location of the waste in the landfill.

Tracking waste in this manner shall be used by the Facility to determine the efficiency and accuracy of a generator's profiling efforts and the rejection rate for incoming waste and to assist in determining the rate of fingerprint analysis required for a given generator.

The Facility number shall designate waste generated on-site. All other numbering and tracking shall be same for all waste managed at the Facility. The tracking system shall be maintained in the Facility Operating Record.

1.9 Notification, Certification, and Recordkeeping

The Facility shall maintain a Facility Operating Record in accordance with 40 CFR § 264.73. The Operating Record will include:

i. all analytical results;

ii. all chain-of-custody forms;

iii. generator notices of restricted wastes not meeting treatment standards or exceeding levels specified in RCRA Section 30049(d), including the information listed in 40 CFR § 268.7(a)(1);

iv. generator notices of restricted wastes meeting applicable treatment standards and prohibition levels, including the information in 40 CFR 268.7(a)(2).

v. all final disposition records;

vi. all manifest and waste discrepancy resolution documentation; and

vii. all other information (e.g., notifications, certifications, waste analysis reports, waste movements) which will be maintained in the Operating Record as noted in this WAP.

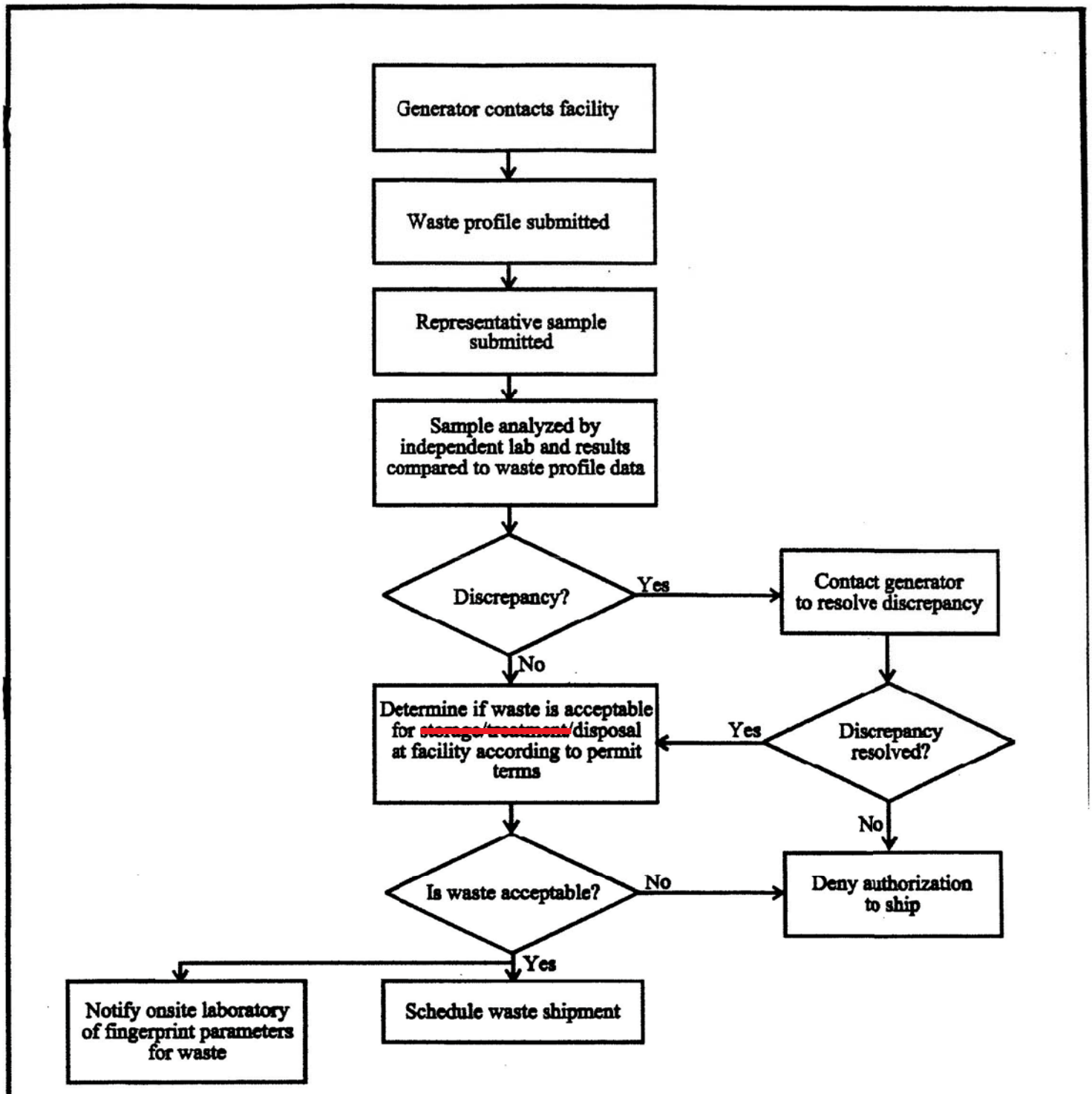
As required in 40 CFR § 268.7, the following records shall be maintained at the Facility for wastes generated on-site, and/or documentation of treating restricted wastes:

i. where on-site generated wastes are characterized to determine compliance with LDR standards using only process knowledge, all data used to make any such determination. These data shall be maintained in the Facility Operating Record;

ii. where a representative sample of waste is analyzed to determine compliance with LDR standards, all waste analysis information. These data shall be retained on-site in Facility Operating Record; and

iii. all notifications and/or certifications submitted by waste generators. These records shall be maintained until Facility closure as required in 40 CFR § 264.73.

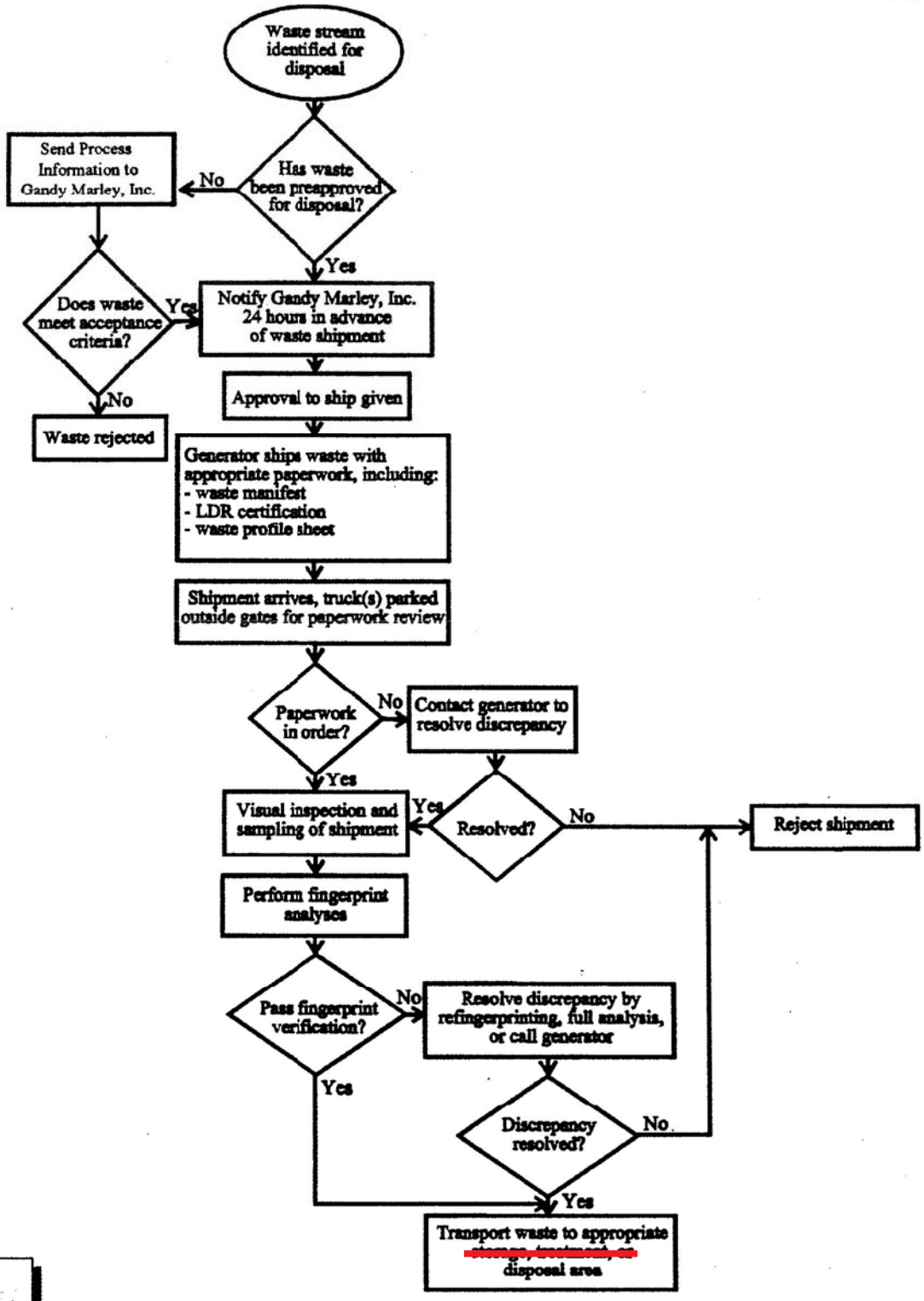
In addition, relevant inspection forms and monitoring data shall be maintained on file at the Facility. Files will be maintained for a minimum of three years (for inspection records and LDR notification), or until approval of Facility closure (for inventory records).



PRE-ACCEPTANCE PROCEDURE FOR FIRST TIME WASTE

TRIASSIC PARK WASTE DISPOSAL FACILITY

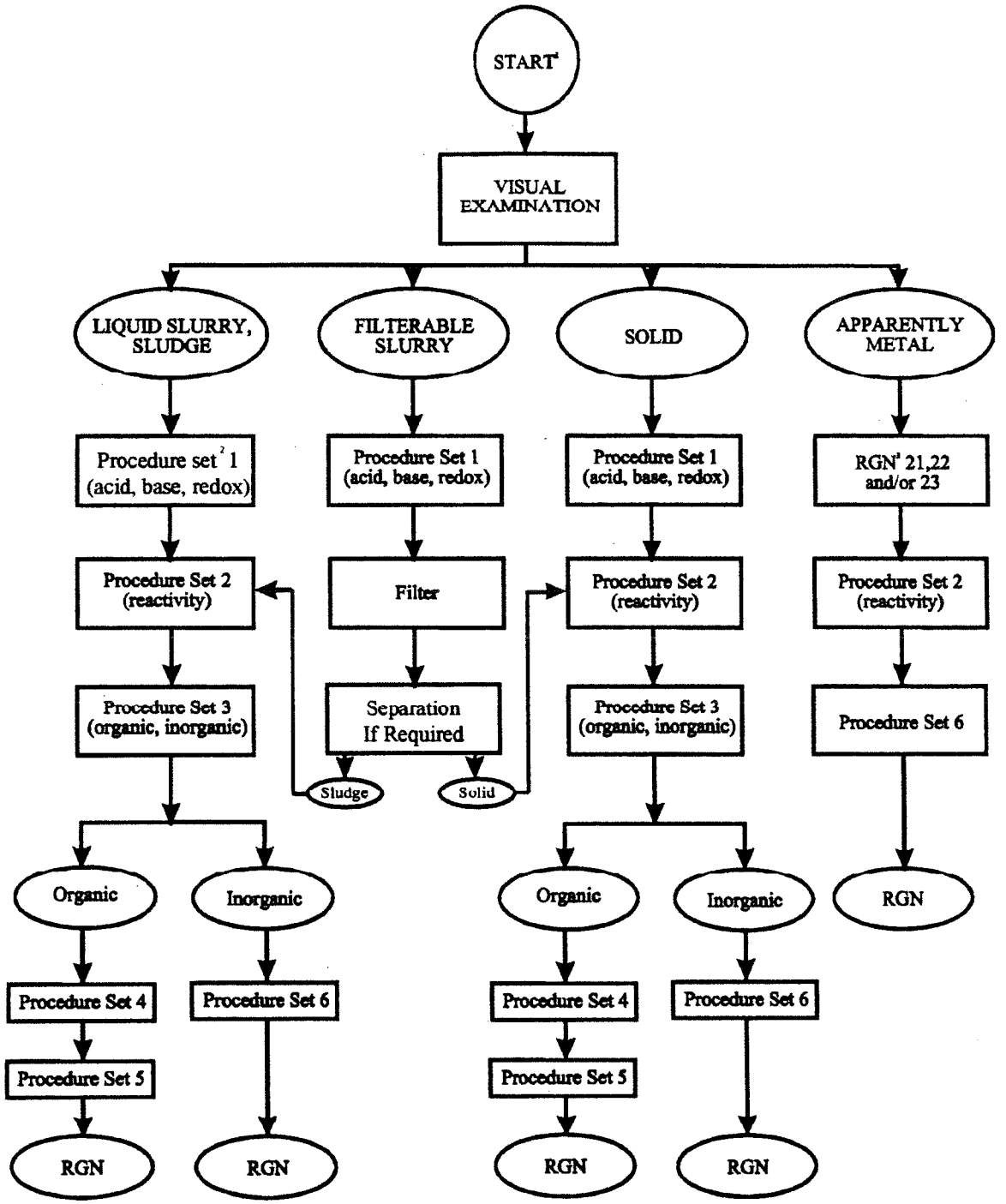
Figure 4-1



INCOMING WASTE SHIPMENT PROCEDURES

TRIASSIC PARK WASTE DISPOSAL FACILITY

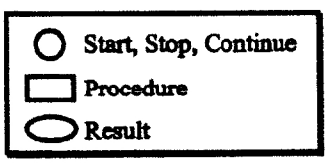
Figure 4-2



[1] Based upon its knowledge of the waste, a generator may only need to use parts of the following sequence to confirm the generator's knowledge of the material.

[2] Procedure sets are identified in EPA's "Design Development of a Hazardous Waste Reactivity Testing Protocol" (EPA 600/2-84-057, February 1984).

[3] RGN = Reactivity Group Number



SEQUENCE OF PROCEDURE SETS FOR DETERMINING REACTIVITY GROUP

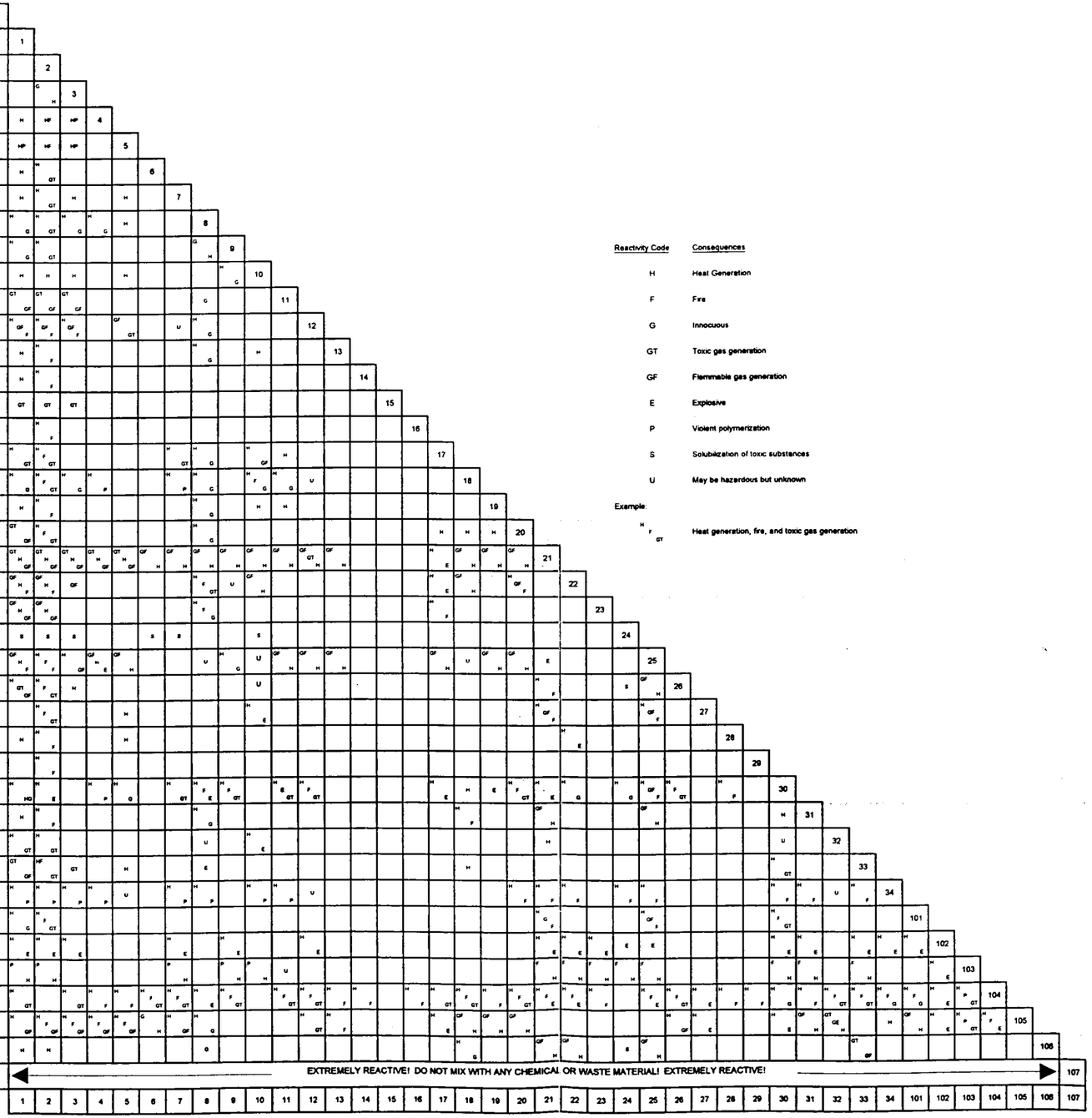
TRIASSIC PARK WASTE DISPOSAL FACILITY

Figure 4-3

REACTIVITY GROUP DESIGNATION AND WASTE COMPATIBILITY MATRIX (1)

TRIASSIC PARK WASTE DISPOSAL FACILITY — **Figure 4-4**

Reactivity Group No	Reactivity Group Name
1	Acids, Mineral, Nonoxidizing
2	Acids, Mineral, Oxidizing
3	Acids, Organic
4	Alcohols and Glycols
5	Aldehydes
6	Amides
7	Amines, Aliphatic and Aromatic
8	Azo Compounds, Diazo Compounds, and Hydrazines
9	Carbamates
10	Caustics
11	Cyanides
12	Dithiocarbamates
13	Esters
14	Ethers
15	Fluorides, Inorganic
16	Hydrocarbons, Aromatic
17	Halogenated Organics
18	Isocyanates
19	Ketones
20	Mercaptans and Other Organic Sulfides
21	Metals, Alkali and Alkaline Earth, Elemental
22	Metals, Other Elemental & Alloys as Powders, Vapors or Sponges
23	Metals, Other Elemental & Alloys as Sheets, Rods, Moldings, etc.
24	Metals and Metal Compounds, Toxic
25	Nitrides
26	Nitriles
27	Nitro Compounds, Organic
28	Hydrocarbons, Aliphatic Unsaturated
29	Hydrocarbons, Aliphatic Saturated
30	Peroxides and Hydroperoxides, Organic
31	Phenols and Cresols
32	Organophosphates, Phosphothioates, Phosphodithioates
33	Sulfides, Inorganic
34	Epoxides
101	Combustibles and Flammable Materials, Miscellaneous
102	Explosives
103	Polymerizable Compounds
104	Oxidizing Agents, Strong
105	Reducing Agents, Strong
106	Water and Mixtures Containing Water
107	Water Reactive Substances



Reactivity Code	Consequences
H	Heat Generation
F	Fire
G	Innocuous
GT	Toxic gas generation
GF	Flammable gas generation
E	Explosive
P	Violent polymerization
S	Solubilization of toxic substances
U	May be hazardous but unknown

Example:

H
F
GT

Heat generation, fire, and toxic gas generation

[1] Determine the reactivity group numbers of the waste being evaluated. Locate the higher number using the left column "Reactivity Group No." and locate the other number on the stair-stepped columns on the right.

Locate the square at the intersection of the two group numbers, then consult the legend to match the reactivity code(s) with the consequences.

Example Waste Profile Sheet *

1. WASTE PROFILE #:_____

EPA Facility ID #: _____

DO NOT LEAVE BLANK SPACES. PLEASE SUBMIT THIS FORM TYPE-WRITTEN.

I. GENERATOR INFORMATION

2. Generator Name: _____ 3. EPA ID #: _____

4. Mailing Address: _____

5. Plant Address: _____

6. Business Contact: _____ Phone #: _____

7. Technical Contact: _____ Phone #: _____

The following information is required to comply with RCRA 40 CFR §§264/265.13 (O.A.C. 3745-65-13) General Waste Analysis.

II. GENERAL WASTE INFORMATION

8. Waste Material Name: _____ ___ 9. Generator Code: _____ (Optional)

10. Describe process that generates waste: _____ 11. SIC Code: _____

12. Is your company the original generator of the waste? ☐ No ☐ Yes If not, provide the name of the original generator:

_____

13. If this waste is a still bottom, are you the original generator of the feed stock? ☐ No ☐ Yes

14. Rate of Generation: _____ Current accumulation: Drums _____ Bulk _____ (Gal.)

15. Check all types of containerization for which you request quotation.

_____ 55-Gallon Steel Drum (SC)
_____ 30-Gallon Steel Drum
_____ 85-Gallon Steel Drum (Without inside container)
_____ 85-Gallon Salvage Drum (With fiber or steel drums inside)
_____ 55-Gallon Fiber Drum
_____ 5-Gallon Pail
_____ Bulk (For bulk shipments, waste viscosity must be < 5000 cps)
_____ Other (Specify)

_____ Palletized small containers
Overall dimensions of material on pallet: _____ x _____ x _____ (High)
Dimensions of pallet only: _____ x _____ x _____ (High)
What are the small containers on the pallet? _____ (1 qt. Bottles, 8 oz. Aerosol Cans, etc.)

III. WASTE STREAM CHEMICAL COMPOSITION**

16. COMPONENTS INCLUDING 40 CFR 261 APPENDIX VII HAZARDOUS CONSTITUENTS	CONCENTRATION RANGE (UNITS)	AVERAGE % MUST TOTAL 100%	TLV (IF PUBLISHED) ACGIH	OSHA
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____
_____	_____ to _____	_____	_____	_____

* If applicable, this Waste Profile Sheet is a new revision of a previously submitted Waste Profile Sheet dated _____. Attach to this Form any additional information which must be known to treat, store, or dispose of the waste in accordance with RCRA §§264/265.13, including but not limited to data developed under RCRA Part 261, Laboratory Analysis Technical Publications or Material Safety Data Sheets.

** 40 CFR 261 Appendix VIII constituents should be identified for combustion facilities, even if not present in high enough concentrations to significantly contribute to the 100% composition.

WASTE PROFILE #:_____

IV. SPECIFIC ANALYSIS OF WASTE

17. Method used to obtain a representative sample of the analyzed waste (i.e., grab, composite, etc.) Sampling methods are described in RCRA 40 CFR 261 Appendix 1.

Generator's Knowledge & MSDS

In completing the next two items, do not leave blanks. If the specific element is not present, indicate "None".

18.

Organic Bound	CONCENTRATION RANGE		AVERAGE
Sulfur	_____	to _____	_____
Chlorine	_____	to _____	_____
Fluorine	_____	to _____	_____
Bromine	_____	to _____	_____
Iodine	_____	to _____	_____
Nitrogen	_____	to _____	_____
Phosphorus	_____	to _____	_____

(Base % WT on Molecular Structure)

19. Metals (Actual Content)

Arsenic	_____	ppm	Mercury	_____	ppm
Barium	_____	ppm	Nickel	_____	ppm
Cadmium	_____	ppm	Selenium	_____	ppm
Chromium	_____	ppm	Silver	_____	ppm
Lead	_____	ppm	Thallium	_____	ppm
Aluminum	_____	%	Silicon	_____	%
Magnesium	_____	%	Sodium	_____	%

20. Does this waste contain PCBs?
❑ No ❑ Yes. If yes, give the concentration regardless of amount and attach supporting documentation:
_____ ppm

21. Does this waste contain insecticides, pesticides, herbicides, or rodenticides?
❑ No ❑ Yes. If yes, identify each in the space below and the concentrations:
_____ ppm
_____ ppm
(Include Safety Data Sheets for each)

22. Does this waste contain Dioxin? ❑ No ❑ Yes

23. Does this waste contain free cyanide> 250 ppm?
❑ No ❑ Yes

24. Does this waste contain free sulfide > 250 ppm?
❑ No ❑ Yes

V. TOXICITY

25. Check Applicable Data

_____	Eye	Explain _____
_____	Inhalation	Explain _____
_____	Dermal	Explain _____
_____	Ingestion	Explain _____
_____	Other	Explain _____
_____	Carcinogen (suspected or known) Explain	

_____
_____

VI. PHYSICAL PROPERTIES

26. Physical state at 70° F (Circle)

Liquid Semisolid Solid
Slurry Sludge Gas

Viscosity at 70° F _____ CPS

27. Is material pumpable? ❑ No ❑ Yes
Varies (Explain): _____

28. Is waste multi-layered? ❑ No ❑ Yes
If yes, please describe and quantify each layer:
1. (Top) _____ %
2. _____ %
3. _____ %

29. Dissolved Solids: _____ % WT
30. Suspended Solids: _____ % WT
31. BTU Value/lbs: _____
32. Ash Content (% by WT): _____
33. Flash Point: _____ °F
34. Vapor Pressure at 70° F: _____
35. Specific Gravity: _____
36. pH: _____
37. Corrosivity: _____ mpy
38. Color: _____

VII. REACTIVITY AND STABILITY

39. What is the Reactivity Group Number(s) for this waste?
_____

In accordance with **"Design and Development of Hazardous Waste Reactivity Testing Protocol,** "EPA Document No. EPA-600/2-84-057, February 1984.

40. Is this material stable? ❑ No ❑ Yes
If no, explain: _____
_____
_____
_____
_____

41. Is this material shock sensitive? ❑ No ❑ Yes
If yes, explain: _____
_____
_____
_____
_____

WASTE PROFILE #:_____

VIII. EPA INFORMATION

42. Is this waste hazardous as defined by RCRA 40 CFR Part 261? ☐ No ☐ Yes

If yes, list the applicable EPA Hazardous Waste Number(s) and explain why you have assigned the number(s). For example, if you assign D001, the reason for selection is that the flash point is less than 140° F. If you assign F002, the reason for selection may be that the waste is the still bottom from the recovery of methylene chloride:

EPA Hazardous Waste Number(s)	Reason for Selection

43. If the answer to #42 is yes, list CERCLA reportable quantities, found in 40 CFR §302.4:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

44. If the waste is not hazardous as defined by federal regulations but is hazardous as defined by state regulations in which the waste was generated, please provide the state hazardous waste number(s). Also provide any state hazardous numbers that are not included in the federal regulations:

State Hazardous Waste Number(s)	Reason for Selection

IX. SAMPLING INFORMATION

45. Sample source (e.g., drum, lagoon, pond, tank, vat, etc.): _____

Date Sampled: _____ Sampler's Name/Company: _____

46. Generator's Agent Supervising Sampling: _____ 47. ☐ No sample required (Provide rationale)

X. LAND DISPOSAL RESTRICTIONS INFORMATION

48. Identify ALL characteristic and listed EPA hazardous waste numbers that apply (as defined by 40 CFR 261). For each waste number, identify the subcategory (as applicable, check none, or write in the description from 40 CFR 268.41, 268.42, and 268.43).

REF #	A. EPA HAZARDOUS WASTE CODE(S)	B. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION IF NOT APPLICABLE CHECK NONE		C. APPLICABLE TREATMENT STANDARDS			D. HOW MUST THE WASTE BE MANAGED? ENTER THE APPROPRIATE LETTER (A-D) FROM BELOW
				PERFORMANCE-BASED (CHECK AS APPLICABLE)		SPECIFIED TECHNOLOGY IF APPLICABLE ENTER THE CFR 268.42 TABLE 1 TREATMENT CODE(S)	
		DESCRIPTION	NONE	268.41(a)	268.43(a)	268.42	
1							
2							
3							
4							
5							
6							

WASTE PROFILE #:_____

To list additional EPA waste numbers and categories, use additional page and check here: _____

Management under the land disposal restrictions:

A. RESTRICTED WASTE REQUIRES TREATMENT? ☐ No ☐ Yes

B.1. RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS? ☐ NO ☐ Yes Method _____

B.2. RESTRICTED WASTES FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY (AND THE WASTE HAS BEEN TREATED BY THAT TECHNOLOGY) ☐ NO ☐ Yes Method ____

B.3. GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS? ☐ NO ☐ Yes Method _____

C. RESTRICTED WASTE SUBJECT TO A VARIANCE? ☐ No ☐ Yes Date/Type _____

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT? ☐ No ☐ Yes

XI. DOT INFORMATION

In accordance with the Department of Transportation 49 CFR Parts 171 through 177, complete the following:

49. DOT Proper Shipping Name: _____

50. DOT Hazard Class: _____

51. DOT UN or NA Number: _____

52. Container Label(s): _____

(For containers of 110 gallons or less)

Additional Description _____

53. Placards: _____

Generator's hazardous waste shipments must also comply with the labeling requirements of RCRA 40 CFR Part 262.

54. Is this waste a soil and/or debris? No: ___ Yes, Soil: ___ Yes, Debris: ___ Yes, Both: ___

55. COMPLETE ONLY FOR WASTES INTENDED FOR FUELS OR INCINERATION		56. RECLAMATION, FUELS OR INCINERATION PARAMETERS (Provide if information is available)	
	TOTAL		RANGE
Antimony as Sb	_____ ppm	A. Heat Value (BTU/lb.)	_____ _____
Beryllium as Be	_____ ppm	B. Water:	_____
Potassium as K	_____ ppm	C. Viscosity (cps):	_____ @ ____°F ____100°F _____150°F
Sodium as Na	_____ ppm	D. Ash:	_____%
Bromine as Br	_____ *ppm/%	E. Settleable solids:	_____%
Chlorine as Cl	_____ *ppm/%	F. Vapor Pressure @ STP (mm/Hg):	_____
Fluorine as F	_____ *ppm/%	G. Is this waste a pumpable liquid? ☐ No ☐ Yes	
Sulfur as S	_____ *ppm/%	H. Can this waste be heated to improve flow? ☐ No ☐ Yes	
* Indicate ppm or %.		I. Is this waste soluble in water? ☐ No ☐ Yes	
		J. Particle size: Will the solid portion of this waste pass through a 1/8-inch screen: ☐ No ☐ Yes	

57. Special Handling Information _____

_____

WASTE PROFILE #:_____

ACCOUNTABILITY STATEMENT

58. I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize (_____) to obtain a sample from any waste shipment for purposes of recertification.

_____	_____	_____
Authorized Signature	Printed (or typed) Name and Title	Date